UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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UNITED STATES OF AMERICA :

- v. - : 23 Cr. 10 (AS)

AVRAHAM EISENBERG, :

Defendant. :

- x

MEMORANDUM OF LAW IN OPPOSITION TO DEFENDANT'S MOTION FOR A JUDGMENT OF ACQUITTAL OR, IN THE ALTERNATIVE, A NEW TRIAL

DAMIAN WILLIAMS
United States Attorney
Southern District of New York
One St. Andrews Plaza
New York, New York 10007

Thomas S. Burnett
Peter J. Davis
Assistant United States Attorneys

Tian Huang
Special Assistant United States Attorney
- Of Counsel

TABLE OF CONTENTS

PRELIMINARY STATEMENT

The jury found, beyond a reasonable doubt, that Avraham Eisenberg committed fraud and manipulation when he stole over $100 million off of Mango Markets. The jurors read private messages the defendant sent before the scheme, laying out the fraudulent plan. They saw how the defendant used fake identities and anonymous accounts to hide himself before committing the crime. They reviewed data showing how his manipulative trading caused the MNGO/USDC exchange rate to rise over 1,000%, allowing the defendant to fraudulently "borrow" vast sums of cryptocurrency from other Mango Markets users. And they heard testimony about how the defendant tried to protect himself after the crime by fleeing the country and demanding that Mango Markets would not pursue criminal charges.

In the face of this mountain of evidence, the defense's motions try to take the case out of the jury's hands by trying to portray factual issues the jurors were asked to, and properly decided, as pure legal questions. None of those efforts warrant overturning the jury's considered evaluation of the evidence or holding a new trial.

First, the jury reasonably applied this Court's instructions to conclude that MNGO Perpetuals are "swaps" subject to the Commodities Exchange Act ("CEA"). The defense tries to resist that decision by portraying MNGO Perpetuals as fundamentally about the value of MNGO alone. But that is a factual claim, and one that the jury rightly rejected. The evidence showed that MNGO Perpetuals were based not only on MNGO, but also on USDC and a funding rate. As this Court instructed the jury, those other components brought MNGO Perpetuals within the CEA's anti-fraud and anti-manipulation laws.

Second, the jury correctly decided that that the defendant scheme was manipulative and fraudulent. With respect to manipulation, the defense sidesteps the jury's verdict by arguing that the defendant's scheme did not constitute manipulation because he did not intend to move a

"market" price. But this Court has already rejected the "market" price framing, and for good reason: There is no textual basis for that position in the statute, and both the CFTC and Second Circuit have rejected it. The jury was properly instructed on the meaning of price manipulation, and the evidence showed that the defendant committed manipulation by dramatically inflating the price of MNGO Perpetuals.

The evidence also powerfully supported the jury's conclusion that the defendant committed fraud and that the fraud was material. Fraud was at the core of, and necessary to accomplish, the defendant's scheme. To obtain over $100 million of cryptocurrency from Mango Markets, the defendant had to misrepresent that he planned to "borrow" those funds and pass a credit check by giving the misleading impression that he had sufficient collateral to back such a loan. He could not have run off with the money without that deception, and the evidence showed that, had Mango Markets or its users known about his true intentions, they would have taken steps to stop the crime by shutting down the platform or withdrawing funds. The jury rejected the defense's factual arguments that this conduct was neither fraudulent nor material because Mango Markets runs on a smart contract, so the defense now tries to effectively create a legal rule that fraud is impossible in the context of such a computer program. But neither this Court's instructions, nor the law, supports that extreme position, and the jury was right to reject it.

Finally, the defense's challenge to jurisdiction and venue ignores the basic factual realities of the case. The defendant's criminal scheme occurred entirely on the internet, and a critical component of that scheme involved a cryptocurrency platform that had most of its key employees in Manhattan. The jury reasonably concluded from the evidence about those fundamental aspects of the defendant's scheme that his crime involved an interstate wire and that venue was proper in the Southern District of New York. There is, in short, no legal reason to overturn the verdict.

BACKGROUND

Mango Markets is a decentralized cryptocurrency exchange that allows people to trade cryptocurrencies and other cryptocurrency-related products, including perpetual futures based on the relative value of MNGO and USDC (a "MNGO Perpetual").[1] One feature of the platform is that it allows customers to borrow and lend different cryptocurrencies. Mango Markets advertised that borrowing operates like a collateralized loan: A borrower selects an amount and type of cryptocurrency to borrow, which is limited by the value of the borrower's assets. The borrowed funds come from the deposits of other customers on the platform. The borrower is obligated to make interest payments, which are automatically withdrawn from the borrower's account, and to maintain sufficient collateral until paying back the loan.

In October 2022, the defendant orchestrated a scheme to fraudulently steal over $100 million worth of cryptocurrency from Mango Markets. His crime involved an intricate series of lies, deceitful trading, and manipulation to line his own pockets at the expense of other Mango Markets and its customers. Specifically, the defendant traded with himself on Mango Markets to create massive MNGO Perpetual positions; fraudulently inflated the value of some of those positions by trading huge amounts of USDC for MNGO on several cryptocurrency exchanges; and then falsely represented that he was "borrowing" against the value of the fraudulently inflated assets, when in reality he planned to steal the funds.

On January 9, 2023, a grand jury in the Southern District of New York returned an indictment (the "Indictment") charging Eisenberg in three counts. Count One charged him with commodities fraud, in violation of Title 7, United States Code, Sections 9(1) and 13(a)(5) and Title

[1] Because the Court closely supervised the trial, the Government assumes the Court's familiarity with the core facts and will provide a more detailed recitation of the key evidence in the argument section, to the extent it is relevant to responding to the defense's claims.

17, Code of Federal Regulations, Section 180.1. Count Two charged him with commodities manipulation, in violation of Title 7, United States Code, Section 13(a)(2). And Count Three charged him with wire fraud, in violation of Title 18, United States Code, Sections 1343 and 2.

Trial commenced on April 8, 2024. On April 18, 2024, the jury found the defendant guilty on all three counts.

STANDARD OF REVIEW

A. Rule 29 Motions

A defendant challenging the sufficiency of the evidence under Rule 29 bears a "heavy burden," *United States v. Gaskin*, 364 F.3d 438, 459 (2d Cir. 2004), because the standard of review is "exceedingly deferential," *United States v. Hassan*, 578 F.3d 108, 126 (2d Cir. 2008). This Court reviews the sufficiency of the evidence *de novo*, *see United States v. Sabhnani*, 599 F.3d 215, 241 (2d Cir. 2010), but "must view the evidence in the light most favorable to the government, crediting every inference that could have been drawn in the government's favor, and deferring to the jury's assessment of witness credibility and its assessment of the weight of the evidence," *United States v. Coplan*, 703 F.3d 46, 62 (2d Cir. 2012). Ultimately, "the task of choosing among competing, permissible inferences is for the jury, not for the reviewing court." *United States v. Cuti*, 720 F.3d 453, 46t2 (2d Cir. 2013).

A conviction must be affirmed if "*any* rational trier of fact could have found the essential elements of the crime beyond a reasonable doubt." *Jackson v. Virginia*, 443 U.S. 307, 319 (1979); *see also United States v. Ng*, 934 F.3d 110, 130 (2d Cir. 2019) ("[A court] may reverse a guilty verdict only if evidence that the defendant committed the crime is nonexistent or so meager that no reasonable jury could find guilty beyond a reasonable doubt."). The jury's verdict "may be based entirely on circumstantial evidence," *United States v. Goffer*, 721 F.3d 113, 124 (2d Cir. 2013), and this Court must analyze each piece of evidence "in conjunction, not in isolation," *United*

States v. Persico, 645 F.3d 85, 104 (2d Cir. 2011). The sufficiency test applies "to the totality of the government's case and not to each element, as each fact may gain color from another." *United States v. Guadagna*, 183 F.3d 122, 130 (2d Cir. 1999).

It is not the Government's burden to "disprove every hypothesis of innocence." *United States v. Abelis*, 146 F.3d 73, 80 (2d Cir. 1998). Rather, "where either of the two results, a reasonable doubt or no reasonable doubt, is fairly possible, the court must let the jury decide the matter." *United States v. Santos*, 541 F.3d 63, 70 (2d Cir. 2008). A Rule 29 challenge "does not provide the [court] with an opportunity to substitute a determination of the weight of the evidence and the reasonable inferences to be drawn for that of the jury." *Guadagna*, 183 F.3d at 129.

B. Rule 33 Motions

Under Rule 33, "the court may vacate any judgment and grant a new trial if the interest of justice so requires." A new trial should be ordered "[s]paringly and in the most extraordinary circumstances." *United States v. Ferguson*, 246 F.3d 129, 134 (2d Cir. 2001); *Romero v. United States*, 28 F.3d 267, 268 (2d Cir. 1994). Because "motions for a new trial are disfavored in this Circuit," *United States v. Gambino*, 59 F.3d 353, 364 (2d Cir. 1995), district courts, after examining the totality of the evidence and considering objectively all of the facts and circumstances, should grant the motion only if the court finds "a real concern that an innocent person may have been convicted." *United States v. Sanchez*, 969 F.2d 1409, 1414 (2d Cir. 1992).

ARGUMENT

I. There Was Sufficient Evidence for a Rational Juror to Conclude that MNGO Perpetuals Are Swaps Subject to the Commodities Exchange Act.

The jury, applying this Court's instructions, decided that MNGO Perpetuals are swaps subject to the CEA. This conclusion was correct and certainly supported by sufficient evidence. The defense's arguments to the contrary rely on factual conclusions that the jury was entitled to

reject and legal claims that do not square with the statute.

A. Factual Background

Traders can buy and sell cryptocurrencies such as MNGO with fiat currency, such as dollars, on cryptocurrency exchanges. Tr. 206-07. Once someone has purchased cryptocurrency, they can use one of many exchanges to trade it for other cryptocurrencies. Tr. 208. On those exchanges, cryptocurrencies trade in pairs. For example, a coin like MNGO may trade against an array of other coins, such as USDC or Bitcoin ("BTC"). Tr. 208-09. Exchanges report prices as the relative value of the two tokens in the pair—such as MNGO/USDC or MNGO/BTC. Tr. 209.

The relative value of two cryptocurrencies in a pair "boils down to the supply [and] demand [for] a particular cryptocurrency pair . . . at a particular exchange, at a particular time." Tr. 209-10. This is because the interest in exchanging two cryptocurrencies may differ at different times and between exchanges. *Id.* Suppose that, at a particular time on a particular exchange, the MNGO/USDC exchange rate is 0.10 MNGO/USDC (meaning a person could get 0.10 USDC for each MNGO) and the MNGO/BTC exchange rate is 0.05 MNGO/BTC (meaning a person could get 0.05 BTC for each MNGO). If there were a sudden swell of people interested in trading their USDC for MNGO on that platform, the value of MNGO would rise relative to USDC, pushing the exchange rate up to, say, 0.20 MNGO/USDC. That would not necessarily change the relative value of those cryptocurrencies on another exchange. It also would not necessarily change the relative value of MNGO/BTC, even on the same platform, because the supply and demand conditions are unique to each cryptocurrency pair. Tr. 210-13.

These same economic forces apply to stablecoins. A stablecoin is a cryptocurrency that is designed to be equal in value to a particular asset. USDC and USDT, for instance, are designed to maintain a value of a U.S. dollar. Tr. 215. These cryptocurrencies are not actually dollars: they are issued by private entities and are not "legal tender for all debts, public charges, taxes, and

dues." 31 U.S.C. § 5103; Tr. 214-15. Instead, the entities that create USDC and USDT attempt to maintain a reserve of assets, to give the market confidence that the cryptocurrencies could be exchanged for a dollar. Tr. 215-16. On cryptocurrency exchanges, the price of USDC or USDT in dollars depends on supply and demand—that is, the willingness of people to trade UDSC or USDT for dollars. If someone can give USDC's or USDT's issuer one of those tokens and receive a dollar in return, theoretically people on cryptocurrency exchanges should also be willing to trade one USDC or one USDT for one dollar. *Id.*

That theory, however, does not always work in practice. While USDC and USDT often convert to dollars on something close to a one-to-one basis, they do not always do so, and at times diverge significantly. GX1358; Tr. 217-21. This is a function of supply and demand: When there are more people interested in selling USDC or USDT than there are people willing to buy those for a dollar each, the price can fall. Tr. 221. That issue can be pronounced—and cause a large price drop—when there are "crises of confidence" that cause people to run to the dollar. *Id.*

Trading cryptocurrencies for dollars or other cryptocurrencies are not the only types of cryptocurrency trades available. There are also a wide variety of derivative products based on cryptocurrencies, including products called perpetuals. A person looking to speculate on how the relative value of a cryptocurrency pair will change can do so through a perpetual. A person who thinks the exchange rate will rise can place a bid to buy a perpetual. That involves proposing a starting price for the perpetual—referred to herein as the reference price—expressed as the exchange rate of the relevant cryptocurrency pair, and the number of contracts the person wishes to trade. Someone who thinks the exchange rate of that pair will fall can do the converse—offering to sell a perpetual by submitting an offer at a particular reference price and a number of contracts. A perpetual is created if the two sides match, with the buyer known as the "long" position and the

seller known as the "short" position. Tr. 229-37.

Once a perpetual is formed, there are two ways the parties exchange payments. One payment is at the end of the trade—called settlement—and is based on the relative value of the referenced cryptocurrency pair, as calculated by a pricing oracle.[2] If the exchange rate has risen above the reference price by the time of settlement, the long position is in the money and receives a payment from the short position. If it has gone down, the reverse happens. *Id.*

The other way parties to a perpetual exchange payments is on a continuous basis, pursuant to a funding rate. Tr. 241-45. The funding rate is a percentage, calculated based on the difference between (1) the mid-point between bids and asks for the relevant perpetual on Mango Markets' orderbook, and (2) the oracle price for the underlying cryptocurrency pair. *See id.*; GX1011, at 92. When the mid-point of the perpetual order book is higher than the oracle price, the long position makes (nearly) continuous funding payments to the short position based on the extent of that difference. Tr. 241-45; GX1011, at 45-46 (noting that funding payments are made every 5 seconds). When the mid-point of the perpetual orderbook[3] is below the oracle price, the short positions make the funding payments. *See id.*

The Mango Markets user guide provides an example of how to calculate a funding rate and how that translates into funding payments. GX1011, at 92. Imagine that bids and asks for a perpetual are 100.45 and 100.55 respectively, and the oracle price is 100. The mid-point between bids and asks (100.50) is 0.50 above the oracle price. If this were the average difference over the entire day, the hourly funding rate would be approximately 0.02%. *Id.* Applied to a single

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[2] The pricing oracle looked at three sources—Serum, FTX, and AscendEx—took the median of the best bid, best ask, and last-traded price from each source, then reported the median of those results as the oracle price. Tr. 455-58.

[3] The orderbook is the compilation of bids and asks on Mango Markets. Tr. 109.

perpetual, this would mean that the long position would pay the short position 0.02% of the perpetual value (which is 100, per the oracle) each hour, resulting in hourly payments of approximately .02, adding up to .50 over the day.[4] *Id.* Because funding payments occur regularly for each contract in a perpetual, the payments add up quickly and create an incentive for people to close out positions, keeping the perpetual prices close to the oracle prices. Tr. 241, 243-44.

MNGO Perpetuals were one type of perpetual available on Mango Markets. The relevant cryptocurrency pair for MNGO Perpetuals was MNGO/USDC. Tr. 318-19; *see* Tr. 1193-94. The webpage for buying and selling MNGO Perpetuals on Mango Markets showed the reference price of those assets as based on the relative value of MNGO and USDC. *See* GX989, 991. And the oracle for the MNGO Perpetual was also based on that cryptocurrency pair. The MNGO Perpetual oracle looked at prices from three sources: the MNGO/USDC market on Serum, the MNGO/USDT market on AscendEx, and the MNGO/USD market on FTX. Tr. 455-58. While, at first blush, only the Serum input was based on the MNGO/USDC market, the evidence showed that, in reality, all three inputs were based on MNGO/USDC. The oracle used a "normalizer to convert" MNGO/USDT prices into MNGO/USDC. Tr. 455-56. And while FTX's market was labeled MNGO/USD, it reflected MNGO trades against stablecoins, including USDC. Tr. 456, 488-89.

MNGO Perpetuals generated two types of payments. One type of payment was based on the relative value of MNGO and USDC at settlement, reflected by the oracle. If the value of MNGO relative to USDC rose above the reference price by the time of settlement, the long position received a payment from the short position. If it went down, the converse would happen. Tr. 232; 235-36. The parties to a MNGO Perpetual also exchanged continuous funding payments, based on

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[4] The numbers in this example are rounded. The actual hourly funding rate would be 0.020833% to result in a daily payment of 0.50.

a funding rate. Mago Markets calculated that funding rate as a percentage, based on the relationship between the mid-point of the MNGO Perpetual orderbook and the oracle price. This funding rate determined the amount of funding payments that one side of the MNGO Perpetual would have to pay the other. Tr. 241; GX991 (showing "1h Funding Rate").

B. The Jury Reasonably Concluded That MNGO Perpetuals Are Swaps.

The jury reasonably decided that MNGO Perpetuals are swaps, under the CEA's definition of that term. The defense's argument to the contrary relies on a misinterpretation of the word "parties" in that definition, which is inconsistent with statutory text and structure.

The CEA defines a swap as any agreement, contract, or transaction that "provides on an executory basis for the exchange . . . of 1 or more payments based on the value or level of 1 or more [specified assets] . . . and that transfers, as between the parties to the transaction, in whole or in part, the financial risk associated with a future change in any such value or level." 7 U.S.C. § 1a(47). That definition encompasses "any agreement, contract, or transaction commonly known as" a number of common instruments, including interest swaps and foreign exchange swaps. *Id.*

A rational jury could—and did—conclude that MNGO Perpetuals meet this definition of a swap. The instruments provide for the exchange of one or more payments: the payment at settlement based on the value of MNGO/USDC, and the stream of funding payments. Those payments also transfer risk between the two sides of the transaction. One transfers the risk of changes in the relative value of MNGO/USDC, and the other transfers risk of changes in the funding rate. The jury reasonably concluded this qualifies as a swap.

The defense does not contest that the structure of MNGO Perpetuals makes them swaps. Instead, the defense claims that the specific MNGO Perpetuals in this case are not swaps because the defendant was on both sides of the transactions. That argument is wrong because it

misinterprets the word "parties" on the statute.

Under the CEA, the term "parties" requires only that a swap has two sides, not that those sides are controlled by different people. This is evident from the text of the definition. Textually, the definition of swap includes "*any* agreement, contract or transaction" in a lengthy list of instruments. 7 U.S.C. § 1a(47) (emphasis added). All of those instruments have at least two sides—a buyer and a seller. The statute does not exclude them from the definition of swaps whenever the buyer and seller are controlled by the entity.

The defense's interpretation of "parties" is also at odds with the structure of the CEA. The statute makes it unlawful to engage in certain swaps if those swaps are "wash sale[s]" or "fictitious sale[s]." 7 U.S.C. § 6c. The defense's view of the law makes this statute inoperative for many swaps: A classic wash trade is one where the same person or entity controls both sides of a transaction. But under the defense's argument, that feature that makes the trade a wash sale also means it is *not* a swap, and so outside the scope of the statute. And indeed, the defense's definition would arguably deprive the CFTC jurisdiction to police manipulative wash trading in swaps.

Judge Rakoff's decision in *SEC v. Terraform Labs*, 23-cv-1346, 2023 WL 8944860 (S.D.N.Y. Dec. 28, 2023), also does not, as the defense claims, support its position. That case simply held that a particular asset that did not transfer any financial risk at all was not a swap. *Id.* at *17. It did not adopt the defense's view that an instrument loses its status as a swap whenever one person controls both sides of the transaction. This Court should not be the first to adopt the defense's strained interpretation of the statute.

C. The Jury Reasonably Concluded That MNGO Perpetuals Are Subject to the Commodities Exchange Act.

The jury reasonably concluded that MNGO Perpetuals are subject to the CEA. The defense's arguments to the contrary rely on factual conclusions the jury was not required to reach

and on arguing with a hodgepodge of statements the Government made during arguments at trial, without providing a legal basis for the defense's position.

A "swap," as defined in the preceding section, is subject to the CEA. The law has a limited carveout for security-based swaps, which are swaps based on "a narrow-based security index," "a single security or loan," or "an event relating to a single issuer of a security or the issuers of securities in a narrow-based security index." 7 U.S.C. § 1a(47)(B)(x); 15 U.S.C. § 78c(a)(68). But some security-based swaps remain subject to the CEA. Those swaps, known as mixed swaps, are security-based swaps that are "also . . . based on the value of 1 or more interest or other rates, currencies, commodities, instruments of indebtedness, indices, quantitative measures, or other financial or economic interest or property of any kind (other than a single security or a narrow-based security index)." 7 U.S.C. § 1a(47)(D).

The Court distilled this statutory scheme into an instruction for the jury. "To find that MNGO Perpetuals are swaps covered by the commodities laws," this Court explained, the jury must find "at least one of the following": "First, that MNGO Perpetuals are based in part on the value of USDC, and that USDC is a currency or a financial or economic interest, or property of any kind." Tr. 1466. Or "[s]econd, that MNGO Perpetuals are based in part on any rate, index, or quantitative measure, other than the price of MNGO or a narrow-based security index." *Id.*

This instruction accurately tracked the definition of mixed swaps in the CEA, excerpting nearly verbatim from relevant portions of the statute. In an effort to raise the bar for qualifying MNGO Perpetuals as mixed swaps, the defense relies heavily on a portion of *CFTC v. Archegos Capital Management*, which cites joint rulemaking from the SEC and CFTC that noted the category of mixed swaps is "narrow" and a "small subset" of swaps. 2023 WL 6123102, at *7 (S.D.N.Y. Sept. 19, 2023) (citing 77 Fed. Reg. 48208, 42891). But that passage is a descriptive

statement that, in 2012 when the rules were proposed, the agencies expected mixed swaps to be few in number compared to the broad universe of other swaps and security-based swaps. It does not provide any guidance for how a jury should evaluate whether the particular instrument here—MNGO Perpetuals, which are a tiny subset of swaps—should be categorized, and the Court appropriately did not caveat its instruction, but instead stuck to the statutory language.

1. The Jury Reasonable Concluded that MNGO Perpetuals are based, in part, on USDC.

The jury reasonably concluded that MNGO Perpetuals are subject to the CEA because they are "based in part on the value of USDC, and . . . USDC is a currency or a financial or economic interest or property of any kind." Tr. 1466; 7 U.S.C. § 1a(47)(D).

The evidence at trial was sufficient for a rational juror to conclude that MNGO Perpetuals are based, in part, on USDC. The Mango Markets website showed that, when traders created perpetuals, the trade was based on the relative value of MNGO and USDC. Traders inputted the "size" and "quantity" of the position they wished to purchase in MNGO and USDC, respectively, which generated a reference "price" in USDC that reflected that exchange rate. GX989, 991; Tr. 214 (identifying blue circle as logo for USDC). Witness testimony established that, once a MNGO Perpetual was created, one payment under that instrument was determined by "the relative value of [MNGO] versus USDC," as calculated by an oracle. Tr. 318. If the value of MNGO rose "relative to USDC," the long position would benefit, and if the value of MNGO fell "relative to USDC," the short position would benefit. Tr. 1193.

The design of the oracle for MNGO Perpetuals and the mechanics of the defendant's scheme also showed that the value of MNGO Perpetuals was based, in part, on USDC. The oracle looked at three sources—Serum, FTX, and AscendEx—took the median of the best bid, best ask, and last-traded price from each source, then reported the median of those results as the oracle price. Tr. 455-58. This meant that, in practice, the oracle was regularly looking at and reporting the

relative value of MNGO/USDC, which is evident from how the defendant carried out his crime.

The oracle, for example, drew from Serum's MNGO/USDC market. Tr. 455. Accordingly, on Serum, the defendant pumped the price by trading over 750,000 USDC for over 3.4 million MNGO. GX1353, 1355. Similarly, the oracle looked at FTX's MNGO/USD market, which reflect trades of MNGO for USDC. Tr. 455-56, 488-89. So on FTX, the defendant pumped the price by trading over 1.2 million USDC for over 16 million MNGO. GX1353, 1355. Finally, the oracle looked at AscendEx's MNGO/USDT market, then converted that price to USDC through a calculation based on the relative value of USDT and USDC. Tr. 455-56. So on AscendEx, the defendant traded over 74,000 USDT for over 1 million MNGO to carry out his manipulative scheme. GX1353, 1355. The defendant needed to trade USDC and MNGO against one another because the MNGO Perpetual was based on the relative value of those cryptocurrencies.

This reality is a function of the basic structure of cryptocurrency markets. Cryptocurrencies trade in pairs on exchanges. Tr. 208. A price is the exchange rate between two cryptocurrencies, on a particular exchange, at a particular time. Tr. 208-10. That exchange rate changes based on the supply and demand for that particular pair, on a specific exchange, at a specific time. *Id.* A dramatic change in the supply and demand conditions for a particular pair of cryptocurrencies on one exchange may significantly alter the exchange rate for that pair, on that exchange, without causing prices to budge for other pairs or on other exchanges. Tr. 210-13. For example, the defendant's rapid price manipulation could cause the value of MNGO relative to USDC to rise dramatically on Serum, without altering the exchange rate of, say, the MNGO/BTC or MNGO/ETH pair on Serum, or the MNGO/USDC price on another platform.

From these facts, the jury was on firm ground to conclude that MNGO Perpetuals are based, in part, on the value of USDC. There is also no meaningful dispute that USDC is "a currency or

a financial or economic interest or property of any kind." Tr. 1466. The jury, then, correctly concluded that MNGO Perpetuals are subject to the CEA.

The defense's factual arguments that MNGO Perpetuals were not based on USDC cannot support overturning the jury's verdict. The defense, for one, notes that Tyler Shipe described the value of MNGO Perpetuals going up or down based on the value of MNGO, without mentioning USDC. *See* Br. 28. The jury, however, was entitled to conclude that Shipe was speaking in shorthand, and rely on the other testimony and evidence described above to conclude that MNGO Perpetuals were also based on the value of USDC. *See, e.g.*, Tr. 231-32; 318; 1193.

Similarly off base, the defense claims that MNGO Perpetuals do not appear on the Mango Markets website as being based on the relative value of MNGO and USDC. Br. 28. That is not correct: The tool for creating MNGO Perpetuals displays the reference price, size, and quantity in terms of MNGO and USDC. GX989, 991. Other aspects of the Mango Markets webpage for MNGO Perpetuals reports values, such as unrealized profit and loss and trading volume, in dollar terms. GX991. But that is consistent with many other parts of the Mango Markets webpage that normalize values of many different types of cryptocurrencies to dollars. For instance, the page reflecting the defendant's cryptocurrency withdrawals shows the value of all cryptocurrencies in dollar terms. GX917. The jury was not required to conclude from the fact that the Mango Markets website reported certain metrics in dollar terms that MNGO Perpetuals were not based on USDC.

In another factual argument, the defense tries to characterize the oracle to downplay the importance of USDC. As the defense tells it, USDC was essentially irrelevant to the MNGO Perpetual oracle. Tr. 28-30. That is wishful thinking. As explained above, two of the inputs for the oracle—Serum and FTX—were based wholly, or in part, on the relative value of MNGO and USDC. The third input, from AscendEx, was based on MNGO/USDT trading, but then normalized

into USDC. The jury could reasonably conclude from this structure that the value of USDC was an essential component of the MNGO Perpetual. As explained above, both sides of a cryptocurrency pair are relevant to the pricing of that pair because prices reflect the *relative* value of those *two* cryptocurrencies, on a particular market, at a particular time.

The defense's remaining factual contentions are, fundamentally, not arguments that MNGO Perpetuals are not based on USDC, but rather claims that USDC is essentially the same thing as a dollar. For example, the defense calls USDC a "medium of exchange" and identifies testimony where witnesses treated USDC and dollars as interchangeable. *See* Br. 28-30. The theory seems to be that, if USDC serves the role of a dollar in MNGO Perpetuals, then MNGO Perpetuals are not really based on the value of USDC.

This argument is factually and legally wrong. Factually, USDC is not a dollar. It is a cryptocurrency token created by a private issuer, backed by a reserve of assets. Because it is not a dollar, it also does not always track the price of a dollar. Data tracking the value of USDC relative to a dollar shows that one USDC often trades for something close to, but not exactly the same as, one dollar, and at times the value diverges significantly. GX1358; Tr. 217-21. The jury, then, had a strong factual basis to reject the defense's claim that there is no "meaningful distinction" between USDC and dollars, or that "any hypothetical change in the value of USDC would have absolutely no effect on the value of the MNGO Perpetual." Br. 30.

Legally, the defense's "medium of exchange" argument has no bearing on whether MNGO Perpetuals are mixed swaps. The CEA defines a mixed swap as any security-based swap that is also based on the value of one or more other assets, including "currencies, commodities," and "other financial or economic interest[s] or property of any kind." 7 U.S.C. § 1a(47)(D). There is no exception for when an asset is a medium of exchange. Indeed, currencies are always mediums

of exchange and some commodities—such as gold—serve as mediums of exchange, as well. Under the plain text of the statute, there is no question that a swap based on, say, the relative value of a stock and the price of gold would be a mixed swap. The same is true for a swap based on the relative value of a stock and the Euro. There is no basis in the text of the statute to treat cryptocurrency, including USDC, differently.

The fact that USDC, theoretically, tracks the dollar is also of no moment. That stability is not a given: the data show that the value of USDC can fluctuate greatly against the dollar. Even if it did track the value of the dollar, the value of USDC would still be a component of the value of a MNGO Perpetual—just as it would if it tracked the Euro or the price of gold. And most fundamentally of all, the evidence at trial showed that the value of USDC against the dollar was not the relevant pairing for the MNGO Perpetual. The value of the perpetual was based on the MNGO/USDC pair, which had its own supply and demand conditions, leading to a unique exchange rate for that pair. USDC is inseparable from the value of that pairing, so MNGO Perpetuals are based, in part, on the value of USDC.

Rather than providing any legal support for its position that USDC should be treated differently than any other property, the defense claims that there is no support for the Government's statement during trial that a swap based, in part, on a foreign currency is a mixed swap. Br. 31. This argument is orthogonal to the key issue at hand, which is whether the jury properly concluded that a MNGO Perpetual is based, in part, on USDC and whether USDC was not simply a currency, but rather a currency or property of any kind. USDC, in short, did not need to be a "currency" for the jury to find that MNGO Perpetuals are mixed swaps.

But in any event, the defense's claim is not true: the definition of mixed swaps explicitly covers any security-based swap that is also based on the value of one or more "currencies." [7]

U.S.C. § 1a(47)(D). The Joint Rulemaking also tracks the statute. In giving an example of how a certain type of security-based swap, known as a total-return swap ("TRS"), can be a mixed swap, it states: "[I]f a TRS is . . . based on non-security-based components (such as the price of oil, *or a currency*), the TRS would also be a mixed swap." 77 Fed. Reg. at 48265 (emphasis added). The defense cites the reference to the price of oil in this sentence, but leaves out the reference to currency. Br. 24. Ignoring the word currency in both the statute and the rulemaking, however, does not make it disappear.

The defense's reliance on the portion of the Joint Rulemaking about quanto and compo equity swaps, Br. 32, also does not support its position that MNGO Perpetuals are not based on USDC. A quanto equity swap is a particular type of TRS based on a security and a foreign currency that uses an exchange rate fixed at inception to hedge away the foreign-currency exposure. 77 Fed. Reg. at 48265. A compo equity swap, by contrast, does not hedge out the foreign-currency risk. *Id.* The Joint Rulemaking classifies quanto equity swaps as purely security-based swaps and compo equity swaps as mixed swaps.

This portion of the Joint Rulemaking is no basis for upsetting the jury's verdict. First, the Joint Rulemaking on quanto and compo equity swaps was a specific decision on a discrete set of swaps. MNGO Perpetuals are neither quanto, nor compo, equity swaps, and the Joint Rulemaking does not express any intention that its analysis of those issues should be a guide for unrelated issues. Second, to the extent there is a point to be drawn from this portion of the Joint Rulemaking, it is the opposite of the defense's claim that there is no support for the position that security-based swaps incorporating a foreign-currency component are mixed swaps. To the contrary, this part of the Join Rulemaking underscores that a security-based swap incorporating a foreign currency typically *is* a mixed swap, which is why the Joint Rulemaking has a specific carveout for quanto

swaps that incorporate a foreign currency, but hedge out that exposure. Third, the defense is wrong to draw on the Joint Rulemaking about quanto swaps to claim that USDC is "incidental" to the MNGO Perpetual. Br. 33. This argument ignores the dynamics of cryptocurrency markets, where the value of a cryptocurrency pair depends on the supply and demand for that particular pair on a specific exchange. Those asset-specific dynamics, which informed the jury's conclusion about MNGO Perpetuals, should control, not an attenuated analogy to an unrelated instrument.

Finally, the defense's reference to the fact that MNGO Perpetuals settle in USDC, Br. 33, does not undermine the jury's verdict. Although the defense repeatedly suggests that the only role USDC plays in MNGO Perpetuals is settlement, *see* Br. 31, 34, that is not the case: The jury had ample evidence to conclude that MNGO Perpetuals are based on the relative value of MNGO and USDC, as determined by the oracle. Settlement in USDC also does not mean, as the defense claims, that MNGO Perpetuals "convey an . . . ownership interest in an asset . . . that incorporates the financial risk" transferred by the swap. 7 U.S.C. § 1a(47)(A)(iii); *see* Br. 33. A risk transferred between the parties to a MNGO Perpetual is the risk in changes of the relative value of MNGO and USDC during the life of the swap. The parties do not exchange any asset during the pendency of the deal that incorporates that risk. And receiving USDC at the end only passes the risk of future changes in the value of USDC alone, not the risk of changes in relative value of MNGO and USDC during the life of the swap that was exchanged through the perpetual.

Whether MNGO Perpetuals were based, in part, on USDC was a question for the jury, and the jury resolved that issue in the affirmative. This Court should not upset that verdict.

2. <u>The Jury Reasonable Concluded that MNGO Perpetuals are based, in part, on the Funding Rate, Which is a Rate or Quantitative Measure.</u>

The jury also reasonably concluded that MNGO Perpetuals are subject to the CEA because they are based, in part, on a "rate" or "quantitative measure"—specifically, the funding rate. Tr.

1466; 7 U.S.C. § 1a(47)(D).

The evidence at trial was clear that, in addition to exchanging a payment at settlement based on the relative value of MNGO and USDC, the parties to MNGO Perpetuals also exchange a stream of funding payments over the life of the trade based on the funding rate. Payments based on a funding rate are a standard feature of perpetuals generally. Tr. 232-33, 241-45. MNGO Perpetuals are no different. As witnesses testified and Mango Markets documents explained, MNGO Perpetuals required the parties to exchange regular funding payments, based on a funding rate. *See* Tr. 322-23; GX1011, at 45-46, 92; *see also* GX991 (identifying the funding rate).

The jury was also right to conclude that the funding rate was a "rate" or "quantitative measure." A "rate" is an "amount of payment or charge based on another amount," or "a charge, payment, or price fixed according to a ratio, scale or standard." *See* "Rate," Merriam-Webster, *available at* https://www.merriam-webster.com/dictionary/rate. That accurately describes the funding rate. As the Mango Markets user guide explains, the "funding rate" is a percentage, calculated based on the difference between, on the one hand, the mid-price between bids and asks for a perpetual on Mango Markets and, on the other, the oracle price for that perpetual. *See* GX1011, at 45-56, 92. The resulting percentage, or ratio, is then applied to the size of the perpetual at issue and prevailing oracle price to produce the funding payments. When the mid-price of the perpetual orderbook is higher than the oracle price, the long position makes funding payments to the short position. Tr. 241-45. The opposite occurs when the mid-price of the perpetual orderbook is lower than the oracle price. *Id.* This is similar in principle to applying a variable interest rate to a bond to calculate interest payments. Thus, the funding rate is a rate or, at a minimum, a quantitative measure because it is a measurement of the difference between the oracle price and the perpetual orderbook mid-price over time.

On these facts, the jury had a reasonable basis to conclude that MNGO Perpetuals entitle the parties to regular payments based on the funding rate, which is a rate or quantitative measure. That was sufficient to find that MNGO Perpetuals are subject to the CEA.

The defense cannot challenge that the funding rate is a rate, so it begins by claiming that the parties were not really arguing about the funding rate at trial, but rather about the funding payments. Br. 34-35. That is legally incorrect. The question for the jury—accurately captured by this Court's instructions—was whether MNGO Perpetuals were based on a "rate" or "quantitative measure." This follows from the statutory language: A swap is a transaction involving payments "based on" the value of one or more assets; a swap is a security-based swap if it is based on a single security or a narrow-based security index; and it is a mixed swap if it is also based on another rate or quantitative measure. *See* 7 U.S.C. § 1a(47). Here, MNGO Perpetuals have payments that are based on the funding rate, so MNGO Perpetuals are based, in part, on a rate. The defense's desire to ignore the rate is at odds with the statute and this Court's instructions.

Next, the defense claims that the funding rate cannot make MNGO Perpetuals mixed swaps because it "was based entirely on the price(s) of MNGO." Br. 36-38. This position is based on the portion of CEA that defines a mixed swap as any security-based swap that "also is based on the value of 1 or more interest or other rates, . . . quantitative measures, or financial or economic interest or property of any kind (*other than a single security or a narrow-based security index*)." 7 U.S.C. § 1a(47) (emphasis added). The argument is wrong for three separate reasons.

First, the funding rate is neither a "single security" nor a "narrow-based security index." The funding rate is a percentage difference between two variables—the oracle and the mid-price of the MNGO Perpetual orderbook. This is percentage difference is not a "single security" because it is not a security at all. It is also not a narrow-based security index. A narrow-based security

index is an "index or group of securities, including any interest therein or based on the value therefrom." 15 U.S.C. § 7ac(a)(68)(E). The funding rate is not an index or group of securities. It is also not an "interest" in a group of securities or based on the value of a group of securities. As this Court instructed the jury, without objection from the defense, an "interest" is a "right, title, or legal share in something." Tr. 1271, 1466; *see also* Dkt. 145, at 1-2 (explaining the definition of "interest"). The funding rate is not a right, title, or legal share in anything, so it cannot be an "interest" in a group of securities or based on the value of a group of securities.

Second, the funding rate is also not derived from a "single security or a narrow-based security index." The defense appears to take the view that if the funding rate derived from a security, it cannot be the basis for finding that MNGO Perpetuals are mixed swaps. *See* Br. 37-38. That is contrary to the text of the statute, which refers to whether a payment under the swap is based on a "rate" or a "single security" or "narrow-based security index," not whether the "rate" is based on either of those two things. *See* 7 U.S.C. § 1a(47).

But even under the defense's view of the statute, the argument still fails. The portion of the mixed-swap definition on which the defense relies refers to "a *single* security *or a* narrow-based security index." *Id.* § 1a(47)(D) (emphasis added). This conspicuously uses the singular: referring to one security *or* one narrow-based security index. The funding rate, however, does not derive from one security or one narrow-based security index. Instead, it derives from the difference between two different things: the mid-price on the MNGO Perpetual orderbook and the oracle price. Even if, as the defense claims, a MNGO Perpetual is a "security" and the oracle is a narrow-based security index, the funding rate would not be based on a *single* security *or* a narrow-based security index. It would be based on the difference between those two separate things.

The defense's framing of the issue betrays this fundamental problem with its argument.

The defense repeatedly states that the funding rate is "based entirely on the price(s) of MNGO." Br. 36-38. But that is not true. Even under the defense's view, the oracle is a narrow-based security index (and, as explained below, that is wrong). And the MNGO Perpetual is an entirely different instrument from the MNGO token: it is a distinct asset, with distinct cash flows. Indeed, the funding rate exists because the MNGO Perpetual would not necessarily have the same reference price as the price of MNGO/USDC on other exchanges. The defense has to elide these distinctions and claim that it is MNGO all the way down because, even under its flawed reading of the law, the funding rate is not derived from a *single* security *or a* narrow-based security index.

Third, a key premise of the defense's argument is that the oracle was "an index"—specifically, a narrow-based security index. *See* Br. 36. But that issue went to the jury, *see* Tr. 1466, and it was reasonable for the jury to reject the defense's argument. A narrow-based security index is "an index or group of securities." 15 U.S.C. § 78c(a)(68)(E). But the oracle is not based solely on securities. As explained above, the oracle drew from markets for MNGO/USDC and MNGO/USDT (normalized to USDC). Even if MNGO is a security, USDC and USDT are not, so the oracle consists of both securities and other types of assets. This is an independent reason that funding rate is not derived from a single security or a single narrow-based security index.

None of the defense's remaining arguments can support overturning the jury's verdict. Grasping at a sentence in the Joint Rulemaking, the defense suggests that finding payments are "akin to a yield based upon the value of a single security, MNGO." *See* Br. 37-38. But that misunderstands both yields and funding rates. A yield is a way of quoting certain types of securities that entitle the holder to payments. "For example, debt securities are often quoted and traded on a yield basis rather than on a dollar price." 77 Fed. Reg. 48263-64. MNGO does not generate a yield and there is no evidence that anyone uses yield to "express[] [its] price or value."

See id. Moreover, funding payments are not a yield from MNGO because, as explained above, the funding rate reflects the difference between two difference prices for different products.

Pivoting away from the "yield" argument, the defense reiterates its claim from closing, *see* Tr. 1414-15, that the funding rate is a narrow-based security index, this time styling it as an argument that the "funding" was a narrow-based security index. Br. 38-39. But as explained above, the funding payments are based on the funding rate, and that rate is not a narrow-based security index because it is neither a group of securities, nor an interest in a group of securities. This is not, as the defense claims, a "faulty, hypertextual argument," Br. 39—it is a straightforward reading of the words of the statute.

The defense's claim that the Joint Rulemaking supports calling the funding rate a narrow-based security index, Br. 39-40, misinterprets the document. The Joint Rulemaking has a section for swaps based on different types of rates. 77 Fed. Reg. at 48262. The defense cites a portion of that section, which notes that rate-based swaps derived from indices of other rates are typically swaps, unless the underlying index is "based on a specific security, loan, or narrow-based group of securities." *Id.* at 48263. This does not mean, as the defense claims, that a rate based on a specific security, loan, or narrow-based security index is, itself, a narrow-based security index. That would not square with the text of the statute. Rather, this captures the situation where, for instance, a rate is based on the interest rate of a single debt security, in which case—for purposes of the swap analysis—the instrument is really based on that security. This is explained clearly in the section on "yields" that follows. *See* 77 Fed. Reg 48263-64.

This section is not a proper analogy for the MNGO Perpetual funding rate because the funding rate is not based on a *single* security or a *single* narrow-based security index. Rather, as explained above, it is based on the difference in levels between two separate things: the mid-point

of the MNGO Perpetual orderbook and the oracle price. That differential is not a proxy for the value of a single security, loan, or narrow-based security index. It is a ratio between two different things, which move independently. The text of the CEA requires classifying this as a mixed swap, and the Joint Rulemaking does not counsel otherwise.

Finally, the defense's reliance on the portion of the Joint Rulemaking about total return swaps is similarly off base. It is true that a TRS can be a security-based swap when it is based "on a single security or loan or a narrow-based security index." 77 Fed. Reg. at 48264. But when it is "also based on non-security-based components (such as the price of oil, or a currency)," it is a mixed swap. *Id.* at 48265. A TRS is also a mixed swap when it incorporates payment elements that are "unrelated to the financing of the security-based swap." *Id.* The MNGO Perpetual has both characteristics: It has a non-security component because one aspect of it is based, in part, on the value of USDC, and the funding rate is a payment element that is unrelated to financing the swap. In short, while a MNGO Perpetual is not a TRS and this Court correctly followed the text of the CEA in its instructions, the Joint Rulemaking on this topic is simply further proof that the jury correctly found that MNGO Perpetuals are mixed swaps because they are not based solely on a single security or narrow-based security index. This Court should not overturn that verdict.

D. The Rule of Lenity Does Not Require a Judgment of Acquittal.

The rule of lenity does not require overturning the jury's verdict. The CEA is sufficiently clear that this Court could confidently instruct the jury on the applicable law, and the jury had the tools it needed to decide the factual questions framed by this Court's instructions.

The rule of lenity is a doctrine of last resort. "The simple existence of some statutory ambiguity . . . is not sufficient to warrant application of that rule, for most statutes are ambiguous to some degree." *Muscarello v. United States*, 524 U.S. 125, 138 (1998). Rather, "[t]o invoke the rule," the Court must find "that there is a grievous ambiguity or uncertainty in the statute," such

that, after using every tool of statutory interpretation, the Court "can make no more than a guess as to what Congress intended." *Id.*; *accord United States v. Castleman*, 572 U.S. 157, 172-73 (2014). That is why courts have not applied the rule of lenity, even to issues of statutory interpretation that have long divided appellate courts. *See Moskal v. United States*, 498 U.S. 103, 108 (1990) ("Nor have we deemed a division of judicial authority automatically sufficient to trigger lenity."); *United States v. Scott*, 990 F.3d 94, 120-21 (2d Cir. 2021) (declining to apply the rule of lenity to the force clause of the Armed Career Criminal Act).

There is no grievous ambiguity in the definition of "mixed swaps" under the CEA. This Court was able to distill the statutory requirements into simple, correct legal principles, against which the jury could measure the facts. And as demonstrated above, this Court can use the standard tools of statutory interpretation to uphold the jury's verdict. That task might be somewhat challenging, but complex is not the same as ambiguous, and the fact that a statute may be complicated is not sufficient to invoke the rule of lenity.

What is more, the defense's does not present a viable alternative to the Government's interpretation of the statute or this Court's instructions. The rule of lenity traditionally arises when the defense has identified a "narrower reading" of the statute at issue. *Moskal*, 498 U.S. at 108. But here, the defense has no true narrower interpretation of the statute; it simply says that MNGO Perpetuals are not mixed swaps and argues that the definition of mixed swaps is too vague. *See* Br. 41-43. This is not really a lenity argument. Saying "mixed swaps do not include MNGO Perpetuals" is not an alternative interpretation of the statutes. And the argument itself sounds heavily in factual arguments about the design of the MNGO Perpetual, the role of USDC, and the operation of the funding rate. These fact issues, however, were properly for the jury and are not the basis for a lenity argument. *See United States v. Gonzalez*, 407 F.3d 118, 124 (2d Cir. 2005)

(rejecting the argument that lenity requires resolving "factual ambiguity" in the defense's favor).

Rather, the defense's general challenge to the clarity of the "mixed swaps" definition sounds more in a vagueness challenge under the Due Process Clause. *See United States v. Halloran*, 821 F.3d 321, 337 (2d Cir. 2016) (explaining that the vagueness doctrine ensures people can understand what conduct is prohibited). But the defense cannot style their argument that way because it clearly could not pass muster. A cardinal principle of vagueness law is that "[a] scienter requirement may mitigate a law's vagueness, especially where the defendant alleges inadequate notice." *Rubin v. Garvin*, 544 F.3d 461, 468 (2d Cir. 2008); *Maynard v. Cartwright*, 486 U.S. 356, 361 (1988) ("Objections to vagueness under the Due Process Clause rest on the lack of notice, and hence may be overcome in any specific case where reasonable persons would know that their conduct is at risk."). Here, the jury found beyond a reasonable doubt that the defendant knew his conduct was unlawful, *see* Tr. 1468, so he could not argue that he lacked sufficient notice that his actions would put him in legal jeopardy.

Finally, reversing the verdict on a rule-of-lenity theory would be particularly appropriate because, at bottom, the defense's argument is not even about the line between legal and illegal conduct. The rule of lenity is meant to ensure "fair notice of what behavior is criminal." *Sash v. Zenk*, 428 F.3d 132, 134 (2d Cir. 2005). But the "mixed swap" question is not, fundamentally, about that issue. Fraud and manipulation are unlawful under both the CEA and the securities laws. The defense's arguments, then, go to which criminal statute he violated, not whether he committed a crime. This further reduces the force of the defense's claim that this is an appropriate case to invoke the rule of lenity. This Court was able to give a clear instruction, the jury was able to apply that instruction to the facts, and the jury found that the defendant knew he was acting unlawfully. There is no basis to overturn that verdict.

E. This Court's Instructions Do Not Entitle the Defendant to a New Trial.

The defense is wrong to argue that a new trial is required because this Court did not instruct the jury to "treat . . . the Mango perpetual as a security." Br. 43-45. This Court properly refused to give the proposed instruction because it was misleading and inaccurate, and the Court's rejection of the proposal did not render the instructions erroneous, let alone prejudicially so.

A challenge to a jury instruction faces a heavy burden. The defendant must demonstrate that: (1) he requested a charge that "accurately represented the law in every respect"; and (2) the charge actually delivered, when viewed as a whole, was erroneous and prejudicial. *United States v. Wilkerson*, 361 F.3d 717, 732 (2d Cir. 2004). A defendant claiming error in a jury instruction must also demonstrate that the error was not harmless. A conviction should not be overturned despite instructional error if it "appears beyond a reasonable doubt that the error complained of did not contribute to the verdict obtained." *Neder v. United States*, 527 U.S. 1, 15 (1999).

This Court was correct to reject the defense's proposed instruction because it did not accurately represent the law in every respect. During the charge conference, the defense proposed, for the first time, that the Court should instruct the jury: "For purposes of this case, Mango and the Mango perpetual are securities." Tr. 1290. The Government did not object to an instruction that the jury could assume MNGO was a security, but did object to the instruction that MNGO Perpetuals were securities on the grounds that it would be confusing to the jury in its task of assessing whether MNGO Perpetuals are mixed swaps. Tr. 1290-94. The Court agreed with the Government and did not give the proposed instruction about MNGO Perpetuals.

The Court's decision was correct because the defense's instruction, as proposed, would have been misleading and inaccurate. The fundamental question for the jury was to decide whether or not MNGO Perpetuals were swaps in general, and mixed swaps in particular. The defense's proposed instruction would have been misleading and inaccurate because it would have strongly,

and erroneously, suggested that MNGO Perpetuals are securities, so they are not swaps or mixed swaps. The defense was not entitled to an instruction that would have confused the jury and given them an incorrect impression of the law.

The defense's argument that MNGO Perpetuals are security-based swaps, and security-based swaps are "securities," Br. 44, is not responsive to this problem. It is true that the "security" includes a security-based swap. 15 U.S.C. § 78c(a)(10). That is not the problem. The issue is that the defense's proposed instruction did not provide any guidance whatsoever about how, or why, the fact that a security-based swap is a security matters for deciding whether MNGO Perpetuals are mixed swaps. It simply stated that "Mango perpetual[s] are securities." Tr. 1290. The lack of legal context was necessary to make the proposed instruction not misleading. As proposed, the defense's instruction was highly likely to sound to the jury like a direction from the Court that the jury should conclude MNGO Perpetuals are not mixed swaps because they are securities.

The Court's refusal to give the proposed instruction also did not render the instruction, as a whole, incorrect or misleading. The Court instructed the jury that MNGO Perpetual were subject to the CEA if the jury found those instruments were "based in part on any rate, index, or quantitative measure, other than the price of MNGO or of a narrow-based security index." Tr. 1466. That instruction was legally correct because it tracked the statutory definition of mixed swaps. It also left the defense free to make exactly the same arguments that it has advanced in its post-trial papers: namely, that the funding rate did not make MNGO Perpetuals a mixed swap because it is based on MNGO or because it is a narrow-based security index.

Finally, the refusal to give the defense's proposed instruction was harmless. As explained above, the MNGO Perpetual's funding rate is based on two things: the mid-price of the MNGO Perpetual orderbook and the oracle price. Even if MNGO Perpetuals were securities and the oracle

price were a narrow-based security index, the MNGO Perpetual would still be a mixed swap because the funding rate would not be based on a *single* security or narrow-based security index. As a result, the legal point underlying the defense's proposed instruction (that security-based swaps are "securities") makes no legal difference to the outcome of the case. The jury also had proof beyond a reasonable doubt that MNGO Perpetuals were based on USDC, which was an independent basis for the verdict. Accordingly, the defense has not made any of the showings necessary for a new trial under Rule 33.

II. The Jury Reasonably Found That the Defendant Committed Price Manipulation.

The jury reasonably found the defendant guilty on Count Two because he manipulated the price of a swap. At trial, this Court correctly rejected the defense's argument that the only relevant "price" for Count Two is the reference price at which MNGO Perpetuals trade on Mango Markets, and not the prices at which they settle. That decision was a correct interpretation of the plain meaning of the relevant statute and the applicable case law. In any event, the evidence at trial also established that the defendant intentionally and artificially inflated both the reference and settlement prices of MNGO Perpetuals, so the defense's argument fails on its own terms.

A. Factual Background

When parties create a MNGO Perpetual, they agree upon the reference price of MNGO relative to USDC. Tr. 229-37; GX989, 991. The parties do not exchange funds at that time. At settlement, the parties look to a second price—the settlement price—which is determined by the oracle. Tr. 229-37, 455-58. If the settlement price of MNGO relative to USDC is higher than the reference price, the long position receives payment from the short position. If it is lower, the reverse happens. Tr. 229-37.

The defendant intentionally manipulated both the settlement and the reference price of

MNGO Perpetuals on Mango Markets. In the days leading up to the scheme, the defendant visited the webpage for the "Mango Protocol Price," GX119A, and bragged in private messages about his plan to "buy a ton, massively increase the price, and borrow on lending to lever," GX502A. He even used the language of market manipulation, writing that, because of some features of the Mango Markets platform, he would have "to pump it a lot more to be profitable." *Id.*

When the day of the crime arrived, the defendant put his manipulative scheme into action. Between 6:20 p.m. and 6:45 p.m., he spent over 10 million USDC to buy MNGO, causing the settlement price of MNGO Perpetuals to increase by over 1,000%. GX1353. The inflated settlement price made it appear that the long MNGO Perpetual positions he had created by trading with himself were incredibly valuable, allowing the defendant to borrow and withdraw huge sums of cryptocurrency from Mango Markets. GX1351-58. He then dumped many of the MNGO tokens he had just purchased, selling them for USDC. This caused the settlement price of MNGO Perpetuals to crash down below the reference price, such that his short MNGO Perpetual positions became valuable, allowing him to borrow and withdraw even more cryptocurrency. *Id.*

Users of Mango Markets are constantly placing bids and offers for MNGO Perpetuals, creating reference prices for those new trades.[5] As explained above, the reference price for new trades often stays close to the oracle price because of the funding rate. Tr. 241-44. Accordingly, the evidence showed that the defendant's manipulative scheme was also intentional manipulation of the reference price of new trades on MNGO Markets, causing the reference price of new MNGO Perpetual trades to skyrocket. Between 6:23 p.m. and 6:37 p.m.—the heart of the manipulation—the reference price of MNGO Perpetuals trading on Mango Markets increased by over 700%. Tr. 573; GX993A. That price then crashed when the defendant dumped the MNGO he had purchased.

[5] This does not change the reference price for existing MNGO Perpetuals.

Tr. 583; GX993B.

B. This Court Correctly Rejected the Defense's Request for An Instruction that "Price" Means "Market Price."

This Court correctly instructed the jury that, in this case, "the price of a swap . . . refers to the price of MNGO Perpetuals on Mango Markets." Tr. 1470. The defense's request to insert the word "market" before the word "price" in the instruction was legally incorrect and confusing, and this Court was correct to reject it.

The defense's proposed "market price" instruction has no home in the statutory text. The anti-manipulation provision of the CEA makes it a crime for "[a]ny person to manipulate or attempt to manipulate the price of . . . any swap." 7 U.S.C. § 13(a)(2). The statute does not use the word "market" or any other language restricting the relevant price. *See United States v. Futch*, 278 F. App'x 387, 394 (5th Cir. 2008) (rejecting defense request to "judicially insert[] the word 'market'" before "price" in a § 13(a)(2) case). It would have been legal error for this Court to revise the statute through its jury instructions.

The defense's atextual proposal also does not square with the statutory context or purpose. Section 13(a)(2) is a remedial statute designed to root out manipulation of swaps. But under the defense's interpretation, the law would not prohibit people from manipulating the price that is essential for deciding who won or lost a particular trade. Take MNGO Perpetuals as an example. No one exchanges the original, reference price; its primary role is to serve as a baseline against which to measure the settlement price. Yet as the defense sees it, manipulating the settlement price—which determines who pays whom, and how much—is not covered by the statute. This nonsensical result is a sure sign the defense's reading of the statute is wrong.

Case law and regulatory decision also support the instruction that this Court gave. In *in re DiPlacido*, the CFTC issued a formal opinion rejecting the argument that "settlement prices are

not legally cognizable as prices that can be the subject of a manipulation charge under the [CEA]," including § 13(a)(2) (identified in the decision as "Section 9(a)(2) of the Act"). CFTC No. 01-23, 2008 WL 4831204, at *30-31 (Nov. 5, 2008). The agency explained that "settlement prices are market prices that can be manipulated." *Id.* at *31. The Second Circuit affirmed that decision. *See DiPlacido v. CFTC*, 364 F. App'x 657, 660 & n.1 (2d Cir. 2009). This position is also consistent with antitrust law, where exercising artificial control over a settlement price is actionable. *See Gelboim v. Bank of America*, 823 F.3d 759, 768 (2d Cir. 2016).

The defense is wrong to read *Amaranth* as, sub silentio, rejecting the CFTC opinion and Second Circuit decision affirming that opinion. In *Amaranth Natural Gas Commodities Litig.*, the Circuit considered a manipulation claim related to settlement prices under § 13(a)(2). 730 F.3d 170, 177 (2d Cir. 2013). While the Court upheld dismissal of the claim in that case, that decision was not because a settlement price was not actionable. *See id.* Indeed, a parallel CFTC action based on "manipulat[ing] the settlement price[s]" of certain futures was allowed to proceed by a district court. *CFTC v. Amaranth Advisors LLC*, 554 F. Supp. 2d 523, 535 (S.D.N.Y. 2008). Thus, the use of the phrase "market price" in *Amaranth* should be read as dicta, not a considered judgment rejecting the CFTC's formal opinion. Indeed, *Amaranth* even cited the Circuit's opinion in *DiPlacido*, which affirmed that settlement prices can be the subject of manipulation.[6]

The defense's reliance on two district court opinions, *Vitanza v. Board of Trade*, No. 00 Civ. 7393, 2002 WL 424699 (S.D.N.Y. Mar. 18, 2002) and *Three Crown Ltd. v. Caxton*, 817 F.

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[6] The defense is wrong to cite what it calls the CFTC "Joint Release" for the proposition that the CFTC believes it is necessary to prove manipulation of a "market" price. Br. 46. The CFTC spoke directly to this topic in *DiPlacido*, and the Joint Release reaffirmed *DiPlacido*, stating: "[W]here, as in *DiPlacido*, a trader violates bids and offers in order to influence the volume-weighted average settlement price, an artificial price will be a "reasonably probable consequence" of the trader's intentional misconduct." *Id.* at 41408.

Supp. 1033 (S.D.N.Y. 1993), is also misplaced. Those decisions did not address § 13(a)(2). Instead, they interpreted the CEA's private right of action provision. *See Vitanza*, 2002 WL 424699, at *5 (S.D.N.Y. March 18, 2002). The CFTC concluded, in *DiPlacido*, that these decisions did not apply to § 13(a)(2), reasoning that it was inappropriate to extend decisions about private rights of action to the reach of the Government's authority and finding the reasoning of the decisions incorrect because "settlement prices are market prices that can be manipulated." 2008 WL 4831204, at *30-31; s*ee also DiPlacido*, 364 F. App'x at 660 n.1 (explaining the distinction the CFTC drew). The CFTC's decision, affirmed by the Second Circuit, is consistent with the text and statutory scheme. Indeed, the CFTC has continued to regulate against the backdrop of *DiPlacido*. *See* 76 Fed. Reg. 41,408 (2011) ("[W]here, as in *DiPlacido*, a trader violates bids and offers in order to influence the volume-weighted average settlement price, an artificial price will be a 'reasonably probable consequence' of the trader's intentional misconduct.").

The defense contends that the CFTC's decision in *DiPlacido* to distinguish *Vitanza* was "without any rationale or explanation." Br. 50. But the Second Circuit too concluded that *Vitanza* does not apply to § 13(a)(2). *DiPlacido*, 364 F. App'x at 660 n.1. This makes good sense because *Vitanza* addressed a different statute that serves a different purpose.

There is, at bottom, no basis in the statutory text, common sense, or the case law for the defense's "market price" rule, and this Court was right to reject it.[7]

C. The Jury Reasonably Found the Defendant Intentionally Manipulated Prices.

The jury had strong evidence, and certainly a sufficient basis on which, to conclude that

[7] The defense's lenity argument is wrong. The word "price" in § 13(a)(2) is not ambiguous, and the defense's alternative interpretation is both wrong and no narrower than the Government's interpretation. The Jury also found that the defendant knew his conduct was unlawful, so he cannot argue that he lacked sufficient notice he was breaking the law.

the defendant manipulated the price of MNGO Perpetuals. There is no meaningful dispute that the defendant intentionally manipulated the settlement price of MNGO Perpetuals. The success of his scheme hinged, in part, on fraudulently inflating the value of his long MNGO Perpetual positions, which the defendant accomplished by manipulating the MNGO Perpetual settlement price. Because a settlement price is a price of a swap, that requires upholding the verdict.

Although it was not necessary, the jury also had sufficient evidence to conclude beyond a reasonable doubt that the defendant manipulated the reference price of MNGO Perpetuals. As explained above, new reference prices for MNGO Perpetuals are constantly created as people trade MNGO Perpetuals. The funding rate keeps the reference price of new MNGO Perpetuals close to the oracle by requiring one side or the other to make payments if there is a gap between those two metrics. Tr. 241-44. Accordingly, a scheme to intentionally manipulate the oracle price is also a scheme to intentionally manipulate the reference price because the latter will move in response to the former. That is exactly what happened here: the defendant's price-manipulation scheme caused the reference price of MNGO Perpetuals to rise by over 700%. Tr. 573; GX993A. Indeed, it is telling that, in describing his scheme, the defendant spoke only of pumping the "price," without drawing fine distinctions between which price he was pumping. *See* GX502A ("The idea is you buy a ton, massively increase the price, and borrow on lending to lever").

The defense's claim that the defendant did not intentionally manipulate the "trading" price of MNGO Perpetuals does not warrant reversing the jury's decision. *See* Br. 45. The reference to "trading" price is wrong three times over. It is legally wrong: the statute does not require manipulation of a "trading" price and the defense never requested such an instruction. It is not how perpetuals work: the parties to the perpetual do not actually exchange the reference price at the outset of the trade, so it makes no sense to think of it as the "trading" price. And it is at odds

with the testimony: witnesses at trial repeatedly resisted the defense's efforts to characterize the reference price as the market or trading price. *See* Tr. 331, 784.

Nor does the defendant's statement that he did not "need to sell" a point in the defense's favor. Br. 51-52. The best reading of that statement is that the defendant did not need to sell because, by manipulating the price of his MNGO Perpetuals, he could borrow against their value. That is price manipulation, and the jury correctly concluded as much.

D. The Government's Arguments During Summation Were Appropriate.

Finally, the defense's argument for a new trial on the grounds that the Government made "improper references" to "pumping," Br. 53-54, is incorrect. This was a fair characterization of the evidence and an important theme of the case. It was also a word that the defendant used himself: in a private chat before the crime, he repeatedly stated that his scheme called for "pump[ing]." GX502A. There was nothing wrong with the Government using the same language.

The defense also misses the mark in claim that "pumping" is not inherently unlawful because a "trading strategy alone, without deception, does not amount to fraud." Br. 54. The Government never argued that there is some independent crime of "pumping." Rather, the Government argued, consistent with this Court's instructions, that manipulating a price with intent to defraud, or to create an artificial price, can be criminal. The defense, fairly, argued that the Government was wrong. There was nothing improper about the way the arguments were presented to the jury, let alone so improper as to require a new trial.

III. The Jury Reasonably Concluded That the Defendant Committed Fraud.

The jury reasonably concluded that the defendant committed fraud by deceiving Mango Markets into believing that he was taking out a loan against valuable assets, when in reality he had neither the intention to borrow the cryptocurrency, nor the collateral to support the loan.

A. Factual Background

The evidence at trial showed that borrowing cryptocurrency on Mango Markets requires following a specific process. A user who wishes to take out a loan must select a "borrow" option on the platform and enter the amount and type of cryptocurrency he intends to borrow. Tr. 307, 310-12; GX1011, at 79-80. This "signal[s] to the platform that [the user is] borrowing funds." Tr. 1182. Clicking the "borrow" button sends Mango Markets information about the details of what the user intends to borrow and about the state of the user's assets. Tr. 307, 313-14; GX1011, at 81. Mango Markets uses this information to determine whether the user has enough collateral to support the loan. *See id.* This is, in essence, a "credit check" to ensure there is sufficient collateral. Tr. 1187. Once a user has borrowed assets, the user must maintain enough collateral to support the loan and pay interest, until the borrower repays the principal. Tr. 307; GX1011, at 61, 148.

When Mango Markets is running the credit check before issuing a loan, it needs to assess the value of the borrowers' assets. This includes determining the value of any MNGO Perpetuals the borrower holds, the value of which depends, on the oracle. The oracle was designed, in part, to guard against manipulation that could give Mango Markets a misleading picture of the value of a MNGO Perpetual. One of the entities that created the oracle made sure it incorporated inputs from three different sources—Serum, FTX, and AscendEx. Tr. 455. The point of selecting the sources was that they were likely to be the best places to find "orderly and efficient markets" where there would be "organic price discovery." Tr. 458-60. The markets also had "anti-manipulation protection," to help ensure that any trading on the platform reflected "organic demand." *Id.*

The jury saw those anti-manipulation rules: AscendEx had "marketplace conduct rules" that prohibited "manipulative conduct" and "deceptive practices," including "price manipulation." Tr. 144-46. Similarly, FTX's terms of service prohibited fraud and other conduct that would

provide "misleading information," as well as "market abuse," such as "disorderly market conduct." Tr. 645-46. Finally, the entity that ran the oracle, Switchboard, had terms of use that prohibited using its website and services for any conduct that would provide "false, inaccurate or misleading information with the intent to unlawfully obtain the property of another." Tr. 454.

Notwithstanding these rules, the defendant stole over $100 million worth of cryptocurrency by deceiving Mango Markets about his actions and assets. After the defendant traded with himself to create massive MNGO Perpetual positions, he used manipulative trades on FTX, AscendEx, and Serum to manipulate Switchboard's oracle for MNGO Perpetuals. *See, e.g.*, GX1351-58. This gave the misleading impression that some of his MNGO Perpetual positions were extremely valuable due to organic trading of MNGO and USDC. *Id.* The defendant capitalized on that misleading impression by selecting the option to "borrow" huge amounts of cryptocurrency from Mango Markets. *Id.*; *see, e.g.*, GX318, 502A, 1002. The defendant, however, had no intention to do any of the things that borrowing entails, such as maintaining sufficient collateral to support the borrow and paying interest. The net result was that the defendant was able to give the false impression he was borrowing based on a good trade, when he was really stealing based on fraudulently inflated assets.

E. The Jury Reasonably Concluded That the Defendant Committed Fraud.

The jury had ample evidence to conclude that the defendant's scheme to steal cryptocurrency off of Mango Markets was fraudulent under the CEA and the wire-fraud statute.

For one, the defendant's representation that he was "borrow[ing]" from Mango Markets was fraudulent because he planned to steal the cryptocurrency he was taking, not borrow it. Multiple witnesses testified that borrowing on Mango Markets entails promising to take on certain obligations, including to have sufficient collateral at the time of the borrow, and to keep a sufficient

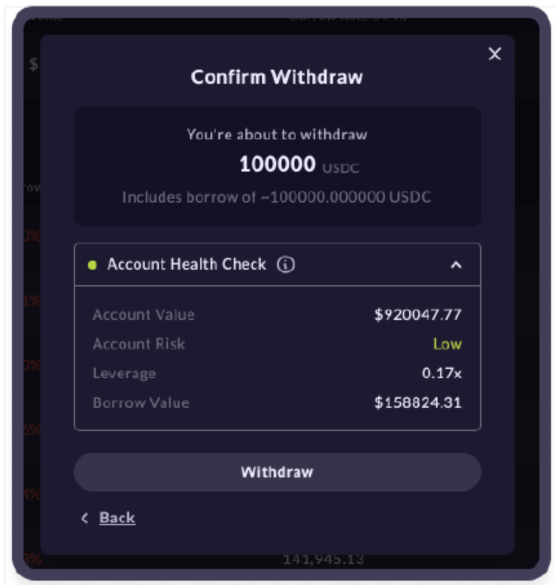
collateral level and pay interest while the loan is outstanding. *See, e.g.*, Tr. 104-07, 307 The evidence showed the defendant did not intend to do any of that, but rather planned to empty the platform of cryptocurrency, then hold the funds hostage so he could negotiate a deal that would allow him to keep a large chunk of the crime proceeds.

The Second Circuit and Supreme Court have long held that this type of misrepresentation is fraud. In *U.S. ex rel. O'Donnell v. Countrywide Home Loans*, for example, the Second Circuit explained that a contractual agreement to take an action can be fraudulent if the party making the promise did not intend to keep that promise "at the time of contract execution." 822 F.3d 650, 658-59 (2d Cir. 2016). To illustrate that principle, the Second Circuit cited *Durland v. United States*, 161 U.S. 306 (1896). There, the Supreme Court held that a defendant had committed mail fraud by offering bonds with no intent to pay according to the schedule in the bond indentures. *Id.* at 313-15. The fact that the failure to pay also constituted a breach of contract did not mean that there was no misrepresentation. *Id.*

The parallel to the defendant's conduct is clear: By representing that he was borrowing, the defendant signaled his intent to undertake the obligations that come along with taking out a loan on Mango Markets. He did not actually intend to fulfill those obligations, which made his representation fraudulent. The fact that Mango Markets had certain consequences for that misrepresentation—such as liquidation—does not change the fact that clicking "borrow" with the intent to steal is fraud. Contracts, too, often have predetermined remedies or caps on damages, but the limitation on contractual remedies does not convert a fraudulent representation into a true one.[8]

[8] The defense rehashes its argument from trial that "there was substantial evidence that the Government was simply wrong about [the defendant's] borrowing," and that he was actually withdrawing profits. Br. 55-56. The jury had ample evidence to reject that defense, including data from Mango Markets showing massive amount of borrowing at the same time as the defendant's crime. *See* GX1002.

It was also fraudulent for the defendant to create the false impression that his MNGO Perpetual position was an extraordinarily valuable asset, against which he could borrow huge sums of cryptocurrency. The defense is wrong to claim that the defendant did not represent anything about his assets when he borrowed from Mango Markets. Br. 55-56. The evidence showed that, when the defendant borrowed, that entailed automatically sending Mango Markets information about his assets, so the program could run a credit check, as follows:



GX1011, at 81.

This information the defendant sent about his assets was misleading. Mango Markets was clear that it intended to give "fully collateralized" loans, which meant that there needed to be sufficient assets backing the loan. Tr. 309-10. To that end, the oracle was designed to value MNGO Perpetuals through inputs that would represent "organic price discovery" and "organic demand," not the whims of a manipulator. Tr. 458-60. The oracle creators accomplished that goal not only by picking multiple sources for the oracle that were likely to have high liquidity, but also by selecting sources that had "anti-manipulation protections," such as the explicit anti-fraud, anti-manipulation, and anti-market abuse rules on AscendEx, FTX, and Switchboard. Tr. 458-60; *See*

GX872, 1236, 1512. And that was important to Mango Markets and its users. Multiple witnesses testified that it would matter to them if they found out someone manipulated the price of an asset because it could put other users of Mango Markets "at risk." Tr. 828-29; *see also* Tr. 110, 380-81.

This is all critical context for understanding the deceptiveness of the defendant's scheme. Using manipulated assets to borrow was fraudulent because Mango Markets and its users expected the oracle would reflect non-manipulated, organic demand. In reality, the oracle reflected the defendant's secret efforts to inflate the value of his assets. That is fraud. *See, e.g.*, *United States v. Regan*, 937 F.2d 823, 829 (2d Cir. 1991) (holding, in criminal case, that "[f]ailure to disclose that market prices are being artificially depressed operates as a deceit on the market place and is an omission of a material fact"); *see also Set Capital LLC v. Credit Suisse Grp.*, 996 F.3d 64, 76 (2d Cir. 2021) (holding that deception includes "intentional or willful conduct designed to deceive or defraud investors by controlling or artificially affecting the price of securities").

The defense is wrong to claim that this case is "reminiscent" of *United States v. Connolly*, 24 F.4th 821 (2d Cir. 2022). Br. 56. That case involved an instruction to banks, posing a hypothetical question to each bank about "the rate at which it could borrow funds, were it to do so by asking for and then accepting inter-bank offers in reasonable market size." 24 F.4th at 835. The Government alleged that the defendant's responses to that question were fraudulent because they were influenced by the positions of other traders at the banks. *Id.* at 834.

In framing the issue, the Second Circuit found that the context of a hypothetical question altered the fraud analysis, noting that because the scheme "is premised on an instruction . . . the government has the burden to negate any reasonable interpretation of the instruction" that would make the answer "responsive." *Id.* The Second Circuit held that the Government failed that test because "the precise hypothetical question . . . was at what interest rate 'could' [the bank] borrow,"

and the Government did not show that the defendant's answers were rates at which the bank could not borrow, or that the answers impliedly conveyed that the answer was not influenced by input from others at the bank. *Id.* at 834-43. In so holding, however, the Circuit was careful to reaffirm the principle that "the government need not prove an actual false statement" to establish wire fraud, "so long as it proves a scheme to engage in some form of deception." *Id.* at 833-34.

The analysis in *Connolly* does not undermine the conviction here. Neither fraudulent aspect of the defendant's scheme implicates the issues presented by the hypothetical question in *Connolly*. By clicking the "borrow" button, the defendant expressed his present intention to borrow. The jury was right to conclude that was false and misleading because he did not actually intend to borrow, but rather planned to steal.

Similarly, when Mango Markets ran the credit check on the defendant's assets, it looked to the actual value of his MNGO Perpetuals, as determined by the oracle. That was deceptive and misleading because the oracle price had been inflated by the defendant's secret manipulation. *See United States v. Chanu*, 40 F.4th 528, 533-34, 540-41 (7th Cir. 2022) (upholding defendant committed wire fraud where defendant manipulated price by submitting actual orders, with concealed intent to cancel those orders). And unlike in *Connolly*, the jury had good reason to conclude that neither Mango Markets nor its users would expect the price to be manipulated because the oracle had been designed to reflect the "organic price discovery" from exchanges with anti-fraud and anti-manipulation rules. Tr. 458-60; *compare Connolly*, 24 F.4th at 842 (finding no implied misrepresentation because there was "no guidance" about input from other bankers at the same institution). The defense is wrong to extend *Connolly* outside the context of responses to hypothetical questions and use it to narrow the wire-fraud statute's ability to protect people from misleading representations about existing facts.

Finally, *Connolly* dealt only with wire fraud and not with commodities fraud. The commodities fraud laws explicitly prohibit the use of any "manipulative device, scheme, or artifice to defraud." 17 C.F.R. § 180.1(a)(1). This is an independent reason why the jury was correct to find that the defendant's fraudulent and manipulative scheme violated the CEA in Count One. This Court, however, does not need to distinguish between the CEA and wire fraud charges because the jury correctly decided that the defendant violated both statutes.

IV. The Jury Reasonably Concluded That the Defendant's Fraud Was Material.

The jury reasonably concluded that the defendant's fraud was material. The defense's argument to the contrary, which boils down to the claim that the fraud could not have been material because Mango Markets used a smart contract, misapprehends both the law of materiality and the agency that humans had in Mango Markets' system.

A. Factual Background

Mango Markets is a decentralized cryptocurrency exchange, which means that it is run by a so-called decentralized autonomous organization ("DAO") instead of a traditional corporation. Tr. 96, 134, 205-06. Members of the DAO propose and vote on ideas for how to run Mango Markets, which they implement through a smart contract. Tr. 206. A smart contract is simply a computer program that runs on the blockchain. Tr. 127, 205-06. Practically speaking, a smart contract serves the same role that a software program does for centralized cryptocurrency exchanges (and regular financial companies), but on the blockchain rather than on a proprietary server. Tr. 357-58, 1179-81.

One feature that the Mango DAO decided to make available on Mango Markets was the ability for users to take out "fully collateralized loans" by borrowing against the user's assets. Tr. 104-05, 309-10. As explained above, to borrow from Mango Markets, a user must click a "borrow" button, which sends information to Mango Markets about the amount the user wants to borrow

and the assets in that user's account. Tr. 307, 311-16. Mango Markets runs a check to ensure there are enough assets to support the borrow, then issues the loan, which comes from other users' deposits. *See id.* The borrower then must maintain sufficient collateral to support the loan and pay interest, until the loan is repaid. *See id.*

Witnesses who both deposited assets on the Mango Markets and helped run the system testified that it would have mattered to them if they knew someone was purporting to "borrow" without actually intending to keep up with collateral requirements or pay interest. Oliver Tonkin, for instance, explained that this would have mattered to him as a depositor because it would have put the funds he had deposited on the platform at risk. Tr. 839. Brian Smith and Tyler Shipe agreed, explaining that someone borrowing without the intent to keep up with collateral requirements would put at risk the funds of all depositors because, at the end of the day, the borrower was borrowing other users' cryptocurrency. Tr. 107-08, 385.

The same witnesses also testified that it would be important to them if someone was intentionally moving the price of an asset on Mango Markets, such as a MNGO Perpetual. As Tonkin put it, "if somebody can manipulate the price of a [MNGO Perpetual], they could potentially inflate the value of the collateral that they hold . . . and withdraw funds for the value of that collateral, which . . . puts my funds as a depositor at risk." Tr. 828-29. Smith and Shipe identified the same risk and explained that knowing about such manipulation would be important to them as users and operators of the platform. *See* Tr. 110, 380-81.

The Mango Markets user guide reflected the importance of ensuring that users only borrowed with assets that could support the loan, devoting an FAQ to the question: What prevents someone from borrowing funds, withdrawing, and running away with it?" Tr. 113. The user guide referred to Mango Markets' system of checks, explaining: "Our system checks deposits, positions,

and borrows accounts to ensure that an individual cannot withdraw more than their equity, calculated by the value of deposits plus the value of open orders, minus the value of borrows." *Id.*

Turning to the defendant's attack, the evidence showed that, to steal over $100 million worth of cryptocurrency off of Mango Markets, the defendant had to manipulate the value of his MNGO Perpetual positions and "borrow" against the value of those fraudulently inflated assets. *See, e.g.*, GX1351-58. He could not have aken so much cryptocurrency off of the platform without manipulating that value or representing that he planned to "borrow" the funds.

When Mango Markets and depositors began to see what was happening, people acted quickly to try to save what funds they could. Developers involved with Mango DAO wrote code to "pause" the operations of Mango Markets, so no one could remove more cryptocurrency from the platform. *See* Tr. 132-33, 420-21, 1131-32. This was important because the value of the defendant's "short" MNGO Perpetual position was positive, so he could have continued to withdraw cryptocurrency from the platform if users deposited more. *See* GX917, 1351-58. Users of Mango Markets who saw the unusual price spike caused by the defendant's manipulation—such as Tonkin and John Casey—also tried to withdraw cryptocurrency from the platform, but were unable to do so because the defendant had run off with it. Tr. 815-17, 829-30; GX817, 1603.

B. The Jury's Materiality Decision Was Reasonable.

The evidence supported the jury's reasonable conclusion that the defendant's fraud was material. This Court explained that the materiality element is designed "to distinguish between those facts or matters that we care about and those that are of no real importance." Tr. 1463. The instructions went on to state that "[a] material fact is one that a reasonable person would consider important in making a decision and that is capable of influencing that decision," and that a "reasonable person" in this context "refer[s] to a person of ordinary intelligence in the position of

Mango Markets or its users." Tr. 1463-64.

The defendant's fraud was material because it was important to, and capable of influencing, the decision to allow him to obtain over $100 million worth of cryptocurrency. The defendant deceived Mango Markets by creating the misimpression that he planned to "borrow" funds, when that was not really the case, and that he had assets sufficient to support the amount of his borrowing. This was important to, and influenced, the decision to lend him over $100 million worth of cryptocurrency. The smart contract would not have allowed him to obtain that money unless he represented that he was "borrowing" it, nor would it have lent him the money absent the false impression he created about the value of his collateral on the platform. The defendant could not have accomplished the objective of the fraud without the deception.

That alone was sufficient for the jury to find materiality. But there was also evidence that the fraud was material to, and capable of influencing, real people. Start with the people responsible for Mango Markets. Members of the Mango DAO created and managed Mango Markets and its smart contract. As Shipe and Smith explained, it would have been important to these people, who had control over Mango Markets, to know if someone was manipulating an asset or borrowing with plans to run off with the funds. *See supra* at 42. That fraudulent conduct could have posed a serious risk to the health of the platform and user funds. *Id.* The evidence showed that the people running Mango Markets could have taken action, had they known about the fraud. They "paused" the entire marketplace upon learning of the defendant's misconduct, which had the effect of stopping all withdrawals. *See* Tr. 132-33, 420-21, 1131-32. Had they known about the fraud, that same action could have prevented the defendant from running off with all the users' funds.

The fraud was also material to Mango Markets depositors, who could have taken steps to protect themselves, had they known the truth about the defendant's fraudulent scheme. Depositors

like Tonkin and Smith testified that it would have been important for them to know if someone was manipulating an asset price or planning to borrow with the intention of running off with the cryptocurrency. *See supra* at 42. Those types of deceptive actions could have put users' funds at risk because, ultimately, a borrower on Mango Markets is borrowing from everyone else on the platform. *Id.* The evidence showed that, had a user known about the defendant's scheme, the user could have withdrawn their funds, to prevent the defendant from getting them. Indeed, both Tonkin and Casey tried to withdraw their assets from the platform when they saw a huge spike in the price of MNGO Perpetuals, but were too late. Tr. 815-17, 829-30; GX817, 1603.

The defense is wrong to cite *United States v. Rigas*, 490 F.3d 208 (2d Cir. 2007), to support their claim that the defendant's fraud could not have been material. The case stands for the opposite. There, a bank offered loans, the interest rates for which depended on the loan's leverage ratio. *Id.* at 233-36. Interest rates were set by a contractual formula, such that a loan's leverage ratio needed to be above a certain amount before the interest rates went up. For example, loans with leverage ratios of between 1.0 and 4.9 would have the same interest rates, whereas loans with leverage ratios above 5.0 would have higher rates. *See id.* The defendants were charged with bank fraud for falsifying loan applications to obtain lower interest rates. Assessing materiality, the Second Circuit held that, because the bank's discretion about interest-rate levels was constrained, the misrepresentations were material only if "the fraudulent leverage ratio resulted in the [borrowers] being in a different category than they would have been had the accurate leverage ratio been reported." *Id.* at 235. The Court went on to find that the Government had proved materiality with respect to one count, where it showed the fraud changed the defendant's interest-rate category, but not with respect to another count, where the Government lacked such proof. *Id.*

Rigas, at bottom, captures the point that this Court made in its jury instructions: that

materiality is designed "to distinguish between those facts or matters that we care about and those that are of no real importance." Tr. 1463. It is also why the jury's materiality decision was correct. Just as *Rigas* required proof that the fraud made a difference (there, to interest rates); here, the evidence showed that the fraud made a difference to the defendant's ability to obtain over $100 million worth of cryptocurrency. He was able to take that cryptocurrency off of the platform only because he misrepresented his intention to borrow and the extent of his assets.

Rather than this straightforward application of *Rigas*, the defense appears to interpret the case to stand for the proposition that, if a representation causes something to happen through an automated process, that representation cannot be material. That is a nonsensical reading of the decision. For one, *Rigas* did not involve an automatic process (such as a smart contract or software programs), so it would be incorrect to interpret *Rigas* as weighing in on that topic.

What is more, tweaking the facts of *Rigas* to involve an automated process shows the absurdity of the defense's position. Suppose, as in *Rigas*, a bank had the exact same approach of only increasing interest rates when a leverage ratio goes above 5.0. *See* 490 F.3d at 233-36. But unlike in *Rigas*, imagine that the bank's loan-issuing process was automated online, so the bank would automatically enter the loan at a particular interest rate, based on the leverage ratio the borrower entered on the bank's website. Finally, imagine a borrower obtains a loan by falsely entering a leverage ratio of 4.0, even though the true ratio was 6.0. Under the plain language of *Rigas*, this is material: the borrower's lie resulted in a lower interest rate. Yet under the defense's reading of *Rigas*, the fraud would be immaterial simply because the bank's system was automated.

That interpretation makes no sense in theory or in practice. From a theoretical perspective, the defense's view is backwards. Materiality tests whether a misrepresentation matters. If a lie automatically leads to a different outcome than the fraudster could have obtained without the lie,

that is powerful proof the lie mattered. But the defense's theory would lead to the opposite conclusion, which is at odds with the point of the materiality inquiry.

Practically, the defense's view creates an arbitrary distinction between lies in person and lies to automated systems that is at odds with the modern world. A recent example in the news proves the point. Just this month, a major bank saw a rash of people depositing fraudulent checks at its ATMs because the bank's system allowed depositors to withdraw a portion of the value of that check before the system could catch the lie. *See* NBC, "Chase bank says it is aware of viral 'glitch' inviting people to commit check fraud," https://www.nbcnews.com/business/consumer/chase-bank-says-aware-viral-glitch-inviting-people-commit-check-fraud-rcna169339. That is bank fraud, and it would clearly be material if the depositors were using the fraudulent checks to deceive bank tellers. But under the defense's reading of *Rigas*, because the depositors are tricking an automated system that has no choice but to dispense money in response to the lie, the misrepresentation is suddenly immaterial. That makes no practical or legal sense.[9]

With this context in mind, the defense's factual objections to the jury's materiality decision do not move the needle. The defense leans on the fact that the Mango Markets smart contract was "permissionless and automatic." Br. 60-61. But that does undermine the jury's verdict. The evidence showed that Mango Markets would automatically issue a loan if a user represented it was borrowing the funds and passed a credit check to make sure the user's collateral supported the borrow. The jury was right to conclude, then, that it was material that the defendant misrepresented his intentions to borrow and the value of his collateral. The defendant could not have gotten the

[9] The defense's challenges to hypotheticals the Government used during summations, Br. 62-65, are irrelevant. The defense runs through ways the hypotheticals do not perfectly match real-world situations or the facts of the case. That was not the point. The point was to illustrate that the defense's theory of materiality—that a lie to an automated system cannot be material—is wrong.

cryptocurrency without the lies, just as the depositors in the check-fraud example above could not trick the bank into letting them withdraw money without a fraudulent check.[10]

It is no defense to materiality that Mango Markets would have issued the loan even if the defendant, theoretically, yelled at his computer that he was lying as he stole from the platform. Br. 62. That is not the test for materiality. Rather, what matters is that Mango Markets did not even have an option for the defendant to lawfully accomplish his scheme. There was no "steal" button to take out funds; he had to misrepresent that he was "borrowing" if he wanted to get everyone's cryptocurrency. Similarly, there was no way for him to borrower more cryptocurrency than his collateral would support; he had to fraudulently inflate the value of his assets to pull off the scheme. The fact that, absent the fraud, the defendant could not have stolen all the assets of the platform is sufficient for the jury to conclude the fraud was material.

Finally, all of the defendant's arguments wrongly presume that the smart contract was all that mattered for the materiality inquiry. As explained above, the evidence also showed that the people who ran and deposited funds on Mango Markets also mattered. The former could have taken steps to stop the defendant's crime, such as by shutting down withdrawals on the platform. And the latter could have protected their assets by withdrawing funds from Mango Markets before the defendant could take them out as a "loan." Those people were not able to protect themselves or the platform because the defendant did not reveal his intentions and his scheme moved too quickly. But that does not make his misrepresentations immaterial. This Court should not adopt the defense's novel view of materiality to upset the verdict.

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[10] The defense's reliance on *United States v. Phillips*, 22 Cr. 138 (LJL), 2024 WL 1300269 (Mar. 27, 2024), is misplaced. The materiality issue in that case focused on whether banks would care if their swap counterparties traded with the intent to trigger barrier options. *See id.* at *27-28. It had nothing to do with the arguments the defense raises here.

V. The Jury Reasonably Concluded the Government Proved the Wire Fraud Scheme Involved an Interstate or Foreign Wire.

The jury reasonably concluded that the defendant's scheme—which took place entirely over the internet—involved the use of an interstate or foreign wires. There is no meaningful dispute that the defendant was in Puerto Rico at the time of the offense. The evidence established that the defendant used at least three types of interstate or foreign wires to commit the crime.

For one, the evidence showed the crime involved wiring information to people running AscendEx from New York City. On the day of the offense, the defendant created an account on AscendEx, deposited cryptocurrency into that account, and made numerous manipulative trades. Witness testimony from James Farrell established that each of these steps involved sending information over the wires to New York City.

Farrell explained that "roughly two-thirds" of the employees who run AscendEx work out of "New York City," including the people responsible for "legal compliance" and the "entire finance team." Tr. 141-42. He went on to testify that, when people use AscendEx, information goes to the New York office at multiple different steps of the process. When someone creates an AscendEx account, information about the account goes to the "management portal," which employees in New York use to manage the account. Tr. 146-47. Next, when someone deposits cryptocurrency into an account, information about that deposit goes to New York, where the finance team reviews it and reconciles all daily deposits and withdrawals. Tr. 148. Further, when people trade on AscendEx, that trade information appears on AscendEx's internal ledger, which goes to the finance team in New York to make sure that "all transactions appear to be reflected in the internal ledger," that "all the right amounts have been credited to all the right users," and to check for "any concerning patterns" in the trading. Tr. 151. This is "akin to what a broker does"

in the securities context. *Id.* Finally, when someone wants to withdraw from AscendEx, the finance team in New York reviews the request and decides whether to approve it. Tr. 152.

The jury also heard that, consistent with these processes, people running AscendEx received information about the defendant's manipulative trading as it was happening. Farrell testified that, on the evening of October 11, 2022, who received a call from someone in the client services group who worked from the New York office. Tr. 158-59. The employee explained that he had seen an unusual trading pattern in MNGO/USDT and wanted to discuss what steps to take, eventually deciding to freeze the account. Tr. 162.

Farrell's testimony readily satisfied the requirement to prove an interstate wire. Registering an account on AscendEx and trading on that platform was an essential part of the defendant's scheme, and Farrell's testimony provided a firm basis to conclude that it involved wiring extensive information to New York City. In short, the defendant caused wires to be sent from out of New York State into New York State, and specifically into New York City, in furtherance of the offense.

The defense's claim that the Government did not show where AscendEx's servers were located, Br. 68-69, is a red herring: Farrell's testimony established that people running AscendEx received information electronically, so the location of the server through which the information was routed is irrelevant. *See, e.g.*, *United States v. Kim*, 246 F.3d 186, 189-91 (2d Cir. 2001) (finding wire element satisfied where wires were sent to bank "headquartered in New York," without discussion of location of servers); *United States v. Bankston*, 820 F.3d 215, 235 (6th Cir. 2016) ("The government was not obliged to prove the actual location of the . . . server, only that [the defendant's] transaction involved the use of an interstate wire."). The defense's claim that the wires did not further the scheme is also wrong: the defendant could not have committed the crime

without using AscendEx, and sending information to the people running the platform in New York was an essential part of how that platform works and done in order to effectuate the scheme. *See* Tr. 1481 (explaining that the wire "need not itself be fraudulent" and must only "be incident to an essential part of [the] scheme"). Farrell, in short, supplied all the jury needed to convict.

There were, however, two additional ways in which the Government proved the defendant used interstate or foreign wires in furtherance of his scheme. One was through proof that the defendant used an internet service provider in Poland to commit the crime. An IP address provides information about the server a particular person is using to access the internet. Tr. 154-55. The jury saw extensive evidence that, despite being in Puerto Rico, the defendant repeatedly used a server in Poland to commit the crime. He used it to access AscendEx, Tr. 154-55; to access Circle, which is where the USDC for his crime originated and where crime proceeds went, GX1101; and to access FTX, where he did extensive manipulative trading, Tr. 552 (comparing IP address to IP address on Circle records). The defendant used this foreign server, in part, to avoid geoblocking restrictions that some of the exchanges used, *see* Tr. 1104, and it was separate, clear evidence that the defendant caused foreign wire communications as part of his crime.

The other additional basis for satisfying the wire element came from a Mango Markets depositor named John Casey. Casey was in Poughkeepsie, New York at the time of the crime. Tr. 816-17. His testimony and Discord messages showed that he saw the massive MNGO price spike from the defendant's manipulative trading at approximately 6:48 p.m.—right in the midst of the crime—and that he was unable to withdraw his cryptocurrency from the platform. Tr. 816-17; GX817. This, too, was an important part of the crime: the price spike Casey saw was the "false pricing signal" that was essential to the defendant's crime, *see ATSI Commc'ns, Inc. v. Shaar Fund, Ltd.*, 493 F.3d 87, 100 (2d Cir. 2007), and Casey's unsuccessful attempt to withdraw from Mango

Markets was a necessary byproduct of the defendant withdrawing all the cryptocurrency from the platform. Causing the transmission of fraudulent information to victims and causing victims to make wire transmission of their own establish the interstate wire element. *Cf. Kim*, 246 F.3d at 192 (finding venue because defendant caused victim to "pa[y] its vendors from New York banks"); *United States v. Booth*, 2024 WL 911854, at *1 (2d Cir. Mar. 4, 2024) (finding venue where defendant caused victim to wire money through New York). Casey's testimony, then, is a third basis for upholding the jury's verdict.

VI. The Jury Reasonably Found Venue By a Preponderance of the Evidence.

Finally, the jury reasonably found, by a preponderance of the evidence, that venue was proper in the Southern District of New York. The defense's objections to that conclusion contort the law of venue, the jury's reasonable factual inferences, and the Government's summations.

A. This Court Properly Instructed the Jury on Venue.

At trial, this Court instructed the jury that, with respect to all three Counts, "it is sufficient to satisfy the venue requirement if any act in furtherance of the crime charged occurred in this district." Tr. 1483. This Court specified that the "act itself need not be criminal" or "taken by the defendant," but that the act had to be "part of the crime that you find he committed." *Id.* With respect to wire fraud in particular, this Court added that the Government had to prove an interstate wire travelled "into or out of the district." Tr. 1484.

The defense is wrong to challenge that instruction on the grounds that the Court should have replaced the phrase "any act in furtherance of" the crime with "any act constituting" the crime. Br. 21-22. As explained above, challenging jury instructions requires showing both that the instruction given was erroneous and prejudicial and that the proposed alternate instruction was accurate "in every respect." *Wilkerson*, 361 F.3d at 732. The defense fails on both fronts.

The instruction, as given, was accurate and consistent with venue instructions that courts routinely provide. Congress has the authority to "create a 'continuing offense' by, in effect, defining the locality of a crime [to] extend over the whole area through which force propelled by an offender operates." *United States v. Brennan*, 183 F.3d 139, 147 (2d Cir. 1999). Consistent with this authority, Congress enacted a broad venue provision for "continuing offenses," providing that "any offense against the United States begun in one district and completed in another or committed in more than one district may be inquired of and prosecuted in any district in which such offense was begun, continued, or completed." *United States v. Saavedra*, 223 F.3d 85, 89 (2d Cir. 2000) (citing 18 U.S.C. § 3237(a)). Applying that statute, courts routinely instruct juries that venue for continuing offenses is appropriate if "any act in furtherance of" the crime occurred in the Southern District of New York, and the Second Circuit routinely upholds those decisions. *United States v. Rutigliano*, 790 F.3d 389, 395 (2d Cir. 2015); *see United States v. Teman*, 2023 WL 382974, at *1-2 (2d Cir. June 8, 2023); *United States v. Abdullaev*, 761 F. App'x 78, 84-85 (2d Cir. 2019); *United States v. Odunaike*, 273 F. App'x 58, 60 (2d Cir. 2008); *see also United States v. Ebersole*, 411 F.3d 517, 527 (4th Cir. 2005) (affirming "in furtherance of" instruction).

Here, the three counts in the case charged continuing offenses for which the "in furtherance of" instruction was appropriate. The commodities-fraud and commodities-fraud counts both criminalize schemes to defraud, and the Second Circuit has consistently held that such schemes are continuing offenses. *See Rutigliano*, 790 F.3d at 396 (explaining that schemes, including wire fraud, healthcare fraud, and bank fraud, are continuing offenses).[11] The commodities-manipulation count is also a continuing offense because price manipulation can occur over time

[11] The Court in *United States v. Phillip* instructed the jury that venue for commodities fraud lies where any act "in furtherance of" the crime occurred. *Phillips* Tr. 1365.

and across different markets and locations. *See United States v. Smith*, 198 F.3d 377, 383-84 (2d Cir. 1999) (finding extortion involving multiple payments is a continuing offense). Moreover, the jury was also instructed that it could convict based on *attempted* commodities manipulation, and because attempt is an "inchoate offense" like conspiracy, it is also a continuing offense that can be prosecuted wherever "acts in furtherance of" the crime take place. *United States v. Davis*, 689 F.3d 179, 188-89 (2d Cir. 2012); *see United States v. Slutsky*, 487 F.2d 832, 839 (2d Cir. 1973) (holding that attempted tax evasion is a continuing offense).

In light of this legal background, this Court's venue instruction was not erroneous. What is more, this Court also directed the jury that the act establishing venue had to be "part of the crime that you find he committed." Tr. 1484. This provided further assurance that the jury would only find venue if it concluded that part of the crime took place in the Southern District of New York, rather than mere preparatory conduct taking place in the District.

By contrast, the defense's proposed instruction would have been legally wrong and misleading. The defense proposed revising the instruction to say that only "an act . . . constituting the charged crime" can establish venue for commodities fraud and manipulation. Tr. 1308-12. The defense did not propose giving any further guidance on what it means for an "act" to "constitut[e]" the charged offenses. This rendered the proposed instruction legally wrong, confusing, and misleading. Commodities fraud and manipulation do not need to be embodied in a single act—they can consist of many acts that occur across time and in different locations. The defense's proposed instruction, however, would have wrongly implied to the jury that each of those crimes has a single locus or single act that makes up the offense, without providing any guidance about how to define or identify that act. The Court was right to reject this proposal.

The defense's position is not saved by citing a string of cases stating that venue is appropriate where the "act or acts constituting" the offense takes place. Br. 21. That is correct as a broad legal principle, but does not mean this Court's instruction (or the long line of decisions it followed) were incorrect. Rather, the case law on continuing offenses stands for the proposition that, when it comes to a continuing offense, an act in furtherance of the crime *is* an act that constitutes the offense. *See United States v. Rodriguez-Moreno*, 526 U.S. 275, 281-82 (1999) (finding that venue for kidnapping is proper where "any part of it took place"). Indeed, many of the decisions the defense cites also use, or cite approvingly, the "in furtherance" language. *See United States v. Kaufman*, 2023 WL 1871669, at *2 (2d Cir. Feb. 10, 2023); *see also United States v. Cabrales*, 524 U.S. 1, 9-10 (1998) (noting conspiracy can be prosecuted where acts "in furtherance" of the crime occurred).

Finally, the defense is plainly wrong to argue that *United States v. Tzolov*, 642 F.3d 314 (2d Cir. 2011), required the Court to give its proposed instruction. Br. 21-22. The defense relies on the portion of *Tzolov* that addressed substantive securities fraud, which the Second Circuit observed "has its own specific venue provision." *Id.* at 318. That specific venue provision, unlike the general venue provision for continuing offenses, specifically states that criminal proceedings may only be brought "in the district wherein any act or transaction constituting the violation occurred." *Id.* It would be wrong to apply the language of that special venue provision to offense—such as commodities fraud and manipulation—to which it does not apply. *Id.* Nor was such an instruction necessary to ensure the jury would not find venue based purely on preparatory acts because this Court instructed the jury that the act supporting venue had to be "part of the crime that you find [the defendant] committed." Tr. 1484.

B. The Jury Reasonably Found Venue by a Preponderance of the Evidence.

The jury correctly concluded that the evidence proved venue was proper in the Southern District of New York. As explained in the section addressing the use of interstate wires, the evidence showed that the defendant made extensive use of a trading platform called AscendEx to carry out his crime. The jury logically concluded from that evidence that parts of all three offenses occurred in the Southern District of New York. *See Rutigliano*, 790 F.3d at 396 ("In challenging the sufficiency of the government's venue evidence, defendants 'bear[ ] a heavy burden, because the reviewing court is required to draw all permissible inferences in favor of the government.'"); *United States v. Potamitis*, 739 F.2d 784, 791 (2d Cir. 1984) ("[V]enue may be proved by circumstantial evidence.")

For example, the jury reasonably could have drawn the following conclusions: First, that when the defendant created an AscendEx account on the day of the crime, he sent information to the people running AscendEx in Manhattan through the "management portal." Tr. 146-47. Second, that when the defendant deposited cryptocurrency on AscendEx, so he would have assets to carry out his manipulative trading, that electronic transmission was reviewed by the finance team in Manhattan, who were responsible for keeping track of funds going to and from the platform. Tr. 147-48. Third, that when the defendant performed his manipulative trades on AscendEx, members of the finance team in Manhattan reviewed that trade information to ensure that AscendEx's internal ledgers appropriately reflected all of the trades and to check for any potentially concerning trading patterns. Tr. 148-51. And fourth, while the defendant was carrying out his unlawful scheme, members of AscendEx's team in Manhattan saw the unusual trading pattern and began taking steps to investigate and stop it. Tr. 159, 162-63.

These steps in Manhattan were essential parts of the offenses. Because AscendEx was one of the three inputs for the oracle, manipulating the MNGO/USDT price on that platform was an

important part of accomplishing his criminal objective. The defendant could not have manipulated that price without creating an AscendEx account, sending cryptocurrency to the platform, and doing trading there, all of which caused activities in Manhattan. Consistent with this reality, the Second Circuit has consistently held that, when a crime involves trading, the location where the brokerage or clearing agent perform trade-related functions, such as "execution or settlement." *United States v. Svoboda*, 347 F.3d 471, 483-84 & n.14 (2d Cir. 2023); *accord United States v. Chow*, 993 F.3d 125, 143 (2d Cir. 2021); *United States v. Khalupsky*, 5 F.4th 279, 291-92 (2d Cir. 2021); *United States v. Buyer*, 22 Cr. 397 (RMB), 2023 WL 6805821, at *5 (S.D.N.Y. Oct. 16, 2023). Similarly, the Second Circuit recently held in *Teman* that venue in a bank-fraud case was proper where the bank "reviewed . . . checks for fraud." 2023 WL 3882974, at *2. AscendEx served these roles, taking actions in Manhattan "akin to what a broker does" with respect to the defendant's trading and monitoring trades for unusual patterns. Tr. 151.

The defense is wrong to claim that the AscendEx actions in Manhattan were "preparatory" or did not line up with the timing of the offense. The Second Circuit has held that an act is not "mere preparation" for venue purposes when "it was a substantial step 'planned to culminate' in the commission" of the crime. *Davis*, 689 F.3d at 190-91; *accord United States v. Abdallah*, 528 F. App'x 79, 82 (2d Cir. 2013); *Kim*, 246 F.3d at 189 (finding wire not "merely preparatory" if it was "material to the completion of the fraud"). Here, it is clear that the defendant's use of AscendEx was a substantial step to carrying out the crime. The defendant created the AscendEx account the day of the crime, using an anonymous email address. GX1500-1513. He filled that account with cryptocurrency less than an hour before beginning the manipulative trading. *Id.* Then he carried out his manipulative trades. This is nothing like incidentally "catching flights" in the District, which the Court found insufficient in *Tzolov*. 642 F.3d at 318. Rather, each of these steps

was "crucial to the success of the scheme." *Royer*, 549 F.3d at 895; *see Khalupsky*, 5 F.4th at 292 ("Counterparties and clearing agents are both crucial to the success of the scheme.").

The argument that venue was not foreseeable in the Southern District of New York is also no basis for reversal. This Court put the question of foreseeability to the jury, Tr. 1484, and the jury found foreseeability by a preponderance of the evidence. That was supported by the record because, when the defendant interacted with AscendEx—by, for example, opening an account or depositing funds—the platform sent him an email reflecting the action that had, at the bottom, an address in New York City. *See* GX606, 607, 608; Tr. 189-90. This was sufficient for the jury to find, by a preponderance of the evidence, that it was foreseeable to the defendant that, when he was dealing with AscendEx, he was dealing with people in New York City. *See Svoboda*, 347 F.3d at 483-84 (holding that receipt of trade confirmations listing exchange in the District was sufficient to uphold jury finding of foreseeability); *Kim*, 246 F.3d at 192-93 (holding that defendant who knew his victim paid invoices from a bank located in the Southern District of New York could reasonably foresee mailings in that district).

Separately, the jury also reasonably could have found venue because a victim was in the Southern District of New York when he saw the defendant's false price signal and was unable to withdraw funds from Mango Markets. As explained above, John Casey's testimony and Discord messages showed that he saw the defendant's price manipulation while the crime was underway, tried to withdraw his funds from Mango Markets, and was unable to do so. This shows that the defendant caused a false price signal in the District and caused a victim to unsuccessfully try to withdraw funds in the District. This is sufficient to establish venue. With respect to the false price signal, the "receipt of electronic transmissions in a district is sufficient to establish venue activity there." *Royer*, 549 F.3d at 895; *accord Lange*, 834 F.3d at 70. That is true even when the electronic

transmission is widely distribute. *See United States v. Rowe,* 414 F.3d 271, 279 (2d Cir. 2005) (finding venue based on advertisement on internet because the advertisement went to the District, among other places). Causing a victim to take an action in the District—as the defendant did when he caused Casey to try, and fail, to withdraw funds—is also a sufficient basis for venue. *See Kim*, 246 F.3d at 192 (finding venue because defendant caused victim to "pa[y] its vendors from New York banks"); *Booth*, 2024 WL 911854, at *1 (finding venue where defendant caused victim to wire money through New York). It would doubtlessly be foreseeable to a sophisticated cryptocurrency trader like the defendant that Mango Markets would have users in New York City, so Casey's testimony is a separate reason to uphold the verdict. *See United States v. Riley*, 638 F. App'x 46 (2d Cir. 2016).

C. The Government's Summation on Venue Does Not Warrant a New Trial.

Finally, the defense is not entitled to a new trial based on perceived errors in the Government's summations. "[A] defendant asserting that a prosecutor's remarks warrant a new trial faces a heavy burden, because the misconduct alleged must be so severe and significant as to result in the denial of his right to a fair trial." *United States v. Coplan*, 703 F.3d 46, 86 (2d Cir. 2012). "It is well established that the Government 'has broad latitude in the inferences it may reasonably suggest to the jury during summation.'" *Id.* at 87 (quoting *United States v. Edwards*, 342 F.3d 168, 181 (2d Cir. 2003)); *see also United States v. Tocco*, 135 F.3d 116, 130 (2d Cir. 1998) ("The prosecution and the defense are generally entitled to wide latitude during closing arguments, so long as they do not misstate the evidence."); *United States v. Caputo*, 808 F.2d 963, 968-69 (2d Cir. 1987) (citing cases after noting that "[t]his court has previously upheld the use of vigorous rebuttal by the prosecution").

Here, the Government's summations about venue—to which the defense did not object—

appropriately made arguments about inferences the jury should draw from the evidence. Indeed, contrary to the defendant's claims, the Government did not make "a blatant misstatement of the law," Br. 18, or make claims about the law at all—the Government simply urged the jury, as it should, to make certain, reasonable inferences from the evidence presented. There were no improper arguments, and certainly none so improper as to constitute "egregious misconduct" that denied the defendant a fair trial. *United States v. Shareef*, 190 F.3d 71, 78 (2d Cir. 1999). This Court also took appropriate steps to minimize any potential prejudice from improper arguments by either party through its instruction that arguments from the lawyers are "not evidence," and that the Court's instructions on the law control. Tr. 1445-46.

CONCLUSION

For the reasons set forth above, the Government respectfully submits that the Court should deny the defendant's motion for a judgment of acquittal under Rule 29, and for a new trial under Rule 33.

Respectfully submitted,

DAMIAN WILLIAMS
United States Attorney
Southern District of New York

By: /s/
Thomas Burnett
Peter J. Davis
Assistant United States Attorneys

Tian Huang
Special Assistant United States Attorney

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